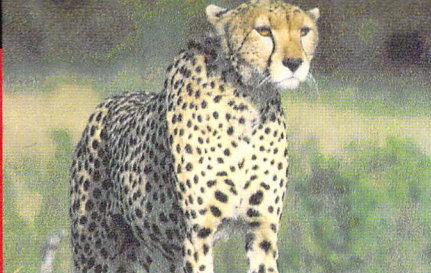


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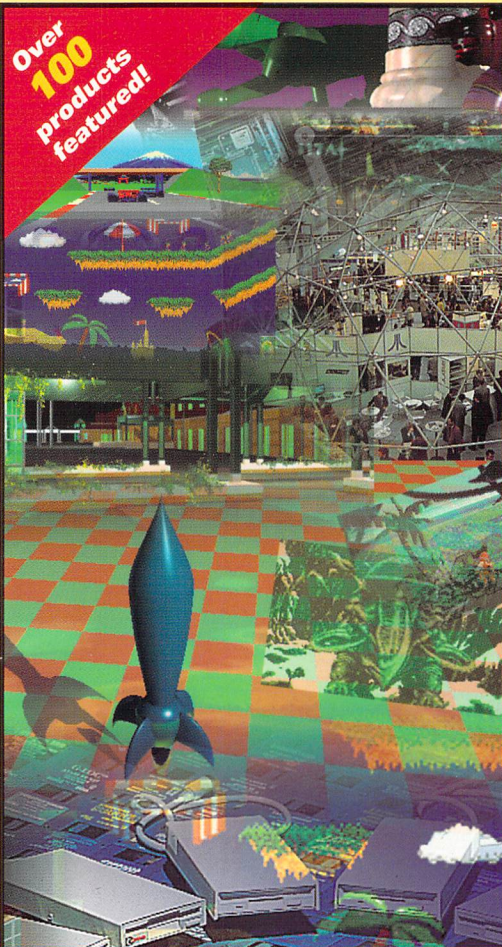
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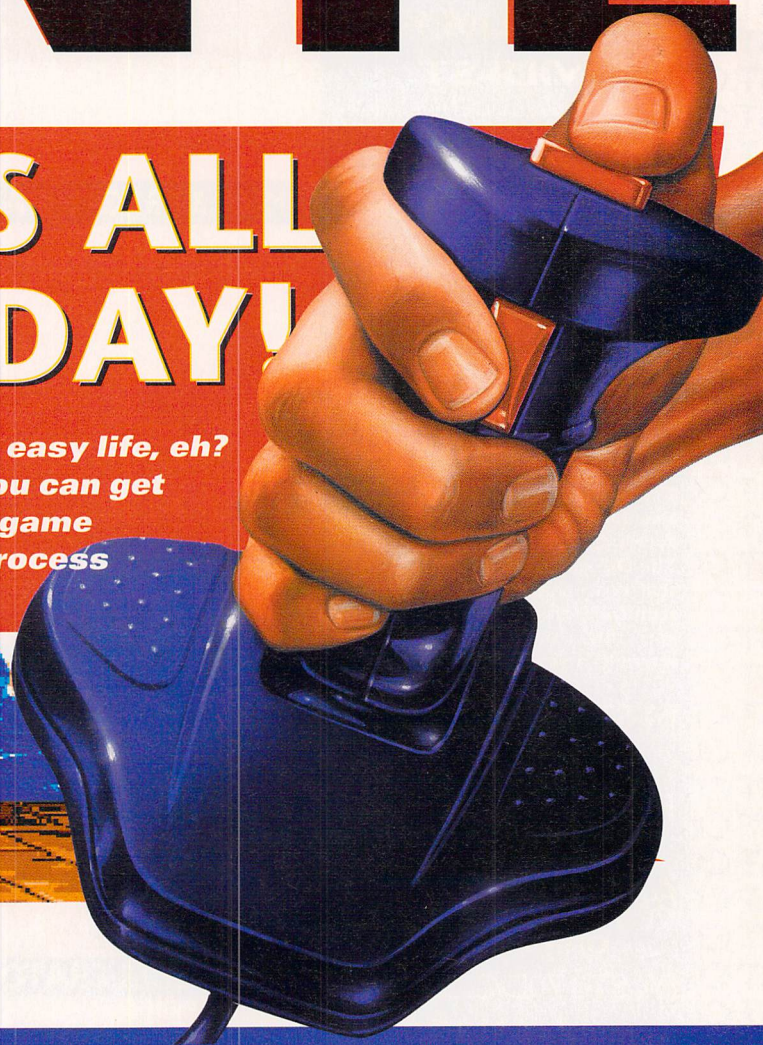
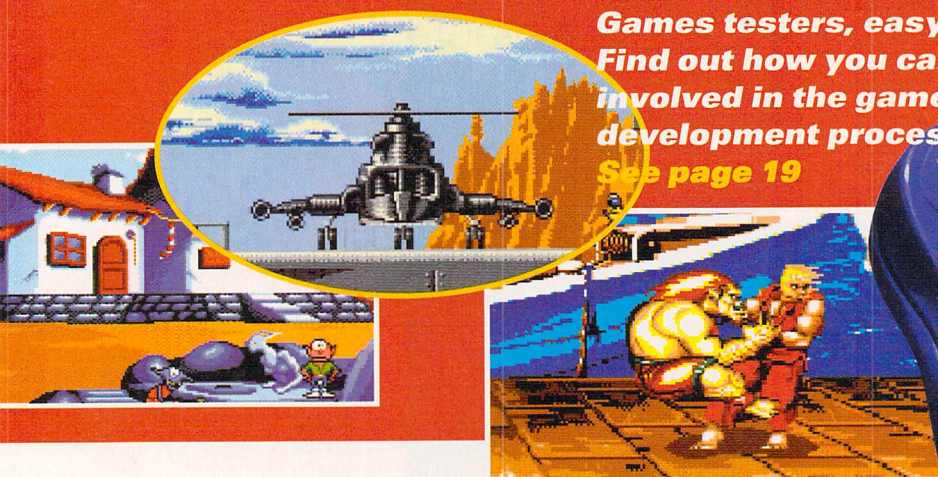
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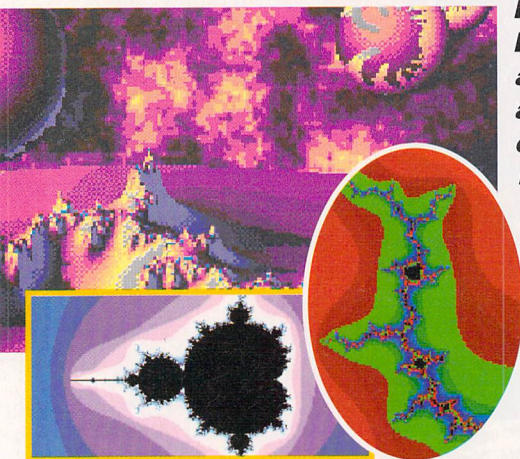
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*Games testers, easy life, eh?
Find out how you can get
involved in the game
development process
See page 19*



PATTERNS FROM NATURE

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needn't be
expensive - we
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STF – BETTER VALUE THAN EVER

You've probably noticed by now that you're getting a little extra something this issue – a Buyer's Guide listing all the essential buys you need to enable you to get the most out of your ST. It's been lovingly crafted by the *ST FORMAT* team and is essential reading whether you take your ST seriously or if you just use it for playing games. The issue's just as packed with features – take the chance to win yourself a job as a games tester once you've read the article starting on page

19, find out the best way to be able to print in colour on page 33 and enter into the world of desktop publishing at either the low or high end – the choice is yours on page 26. We take a look at two of the latest upgraded programs, *Notator Logic* (page 54) and *Calligrapher Gold* (page 56) – are they worth paying the extra cash for or shouldn't you bother? On the games front there's the first Falcon-specific game, *Llamazap* which is now available – see page 66 – and *Zool* has finally made it onto the ST. Check out the review on page 69 and the Cover Disk demo. As usual the issue's packed to the gills with information, so sit back, relax and discover...



Paula Richards,
EDITOR

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Find out how you can get to play games all day every day as a company's games tester.

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COVER DISK 51



There's a magnificent selection for you this month

■ **Zool** – race against time in our demo of this speedily scrolling platformer.

■ Zool sliding down the strawberries and cream.

■ **Fracplay** – create beautiful fractals quickly in up to 256 colours – and on your Falcon as well.

■ Granny's lounge carpet was trendier than she realised.

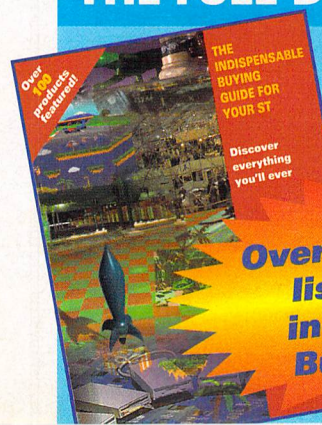
■ **Prensorium** – 50 levels of this absorbing maze puzzle.

■ **The Missing Link** – this massive STOS extension enables you to exploit STOS to within a millimetre of its life.

■ **View Pic** – finds, displays and prints your pictures.

And much, much more!

TURN TO PAGE 12 FOR THE FULL DETAILS



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JAGUAR VS 3DO. LET THE BATTLE

by Paula Richards

As we head towards the fourth quarter and the release of the Jaguar, more details have been emerging about how Atari intend to take on their nearest competitor, 3DO, who are set to release their Interactive Multiplayer machine in October.

They're hardly going for the subtle approach, either; *Jurassic*



■ The Jaguar logo - Atari expect that we'll be seeing a lot of this in the near future.

Park looks as if it's to be the game over which the battle will be fought. Although the Jaguar is expected to have plenty of potential to link up with CD peripherals, telephone lines and the like, the



■ Lots of brightly coloured cartoon fun as you follow Buster Bunny, Babs Bunny and Plucky Duck around in *Tiny Toon Adventures*.

real grisly battle will definitely be on the games front, with its potential for multi-media applications coming later. And *Jurassic Park*, with the huge amount of publicity and critical acclaim that the film

has received is the perfect title to start the ball rolling. It's a household name, it holds almost universal appeal and, as long as the software is ready in time, could steal this Christmas away.

THE TECHNICAL DIFFERENCES BETWEEN 3DO AND THE JAGUAR

64-BIT SYSTEM BUS: The Jaguar uses four custom 64-bit RISCs (Reduced Instruction Set Chipss) running in parallel to ensure high-speed operation of the system, the memory controller, object processor, graphics processor and blitter. 3DO uses a 32-bit ARM6 RISC processor and a maths co-processor.

SOUND: The Jaguar uses a 27 MIPS Digital Signal Processor with 8K of Static RAM (SRAM) for fast 16-bit sound processing; the 3DO's DSP doesn't use SRAM at all.

JOYSTICK: Jaguar has two controller ports capable of supporting digital and analog devices, keyboards, lightguns and mice. Also included is a high speed synchronous serial port for connection to modems, cable TV systems and networks, and a ComLynx I/O port to connect Jaguars together for multi-player games. 3DO's expansion and control ports enable modems, controllers, goggles and keyboards to be connected.

68000: Jaguar uses a 68000 CPU running at 13.3MHz acting as a general purpose control processor to oversee system operations. 3DO uses the same ARM6 RISC processor used in the Acorn Archimedes, a 32-bit processor using a reduced instruction set enabling it to process instructions at high speed.

CARTRIDGE AND CD-ROM: Jaguar has a ROM cartridge capacity of up to 6MBytes of compressed or uncompressed data. Up to 50MBytes of data can be stored on a ROM cartridge in compressed format. An optional double speed CD-ROM drive can also be connected. 3DO can also connect CD-ROM drives and hard drives.

DRAM MEMORY CONTROLLER: Controls the movement of data in memory in the Jaguar, this function is also performed by the DMA engine in 3DO.

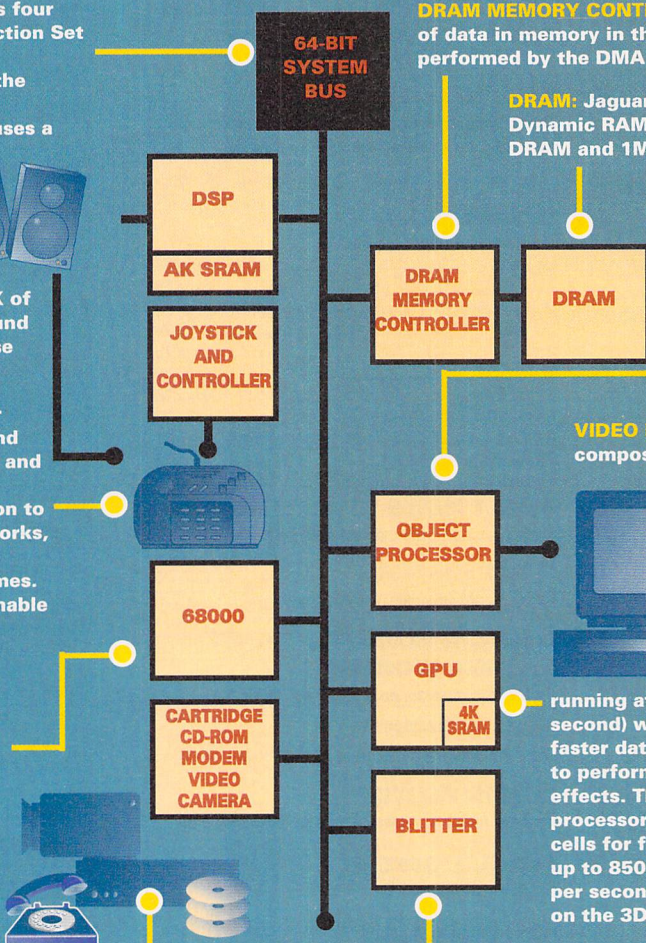
DRAM: Jaguar has 2MBytes of fast page-mode 64-bit Dynamic RAM for data storage, 3DO has 2MBytes of 32-bit DRAM and 1MByte of Video RAM (VRAM) for graphics.

OBJECT PROCESSOR: The Jaguar has a programmable object processor that can act as different types of video architectures such as an advanced sprite engine, pixel-mapped systems or character mapped systems. The 3DO relies on its twin graphics processors and DMA engine to produce its versatile cell-based graphics.

VIDEO PROCESSING: The 3DO generates TV, composite video and S-video (Super VHS) output. The Jaguar has these three outputs plus RGB for an ultra sharp output display on high res colour monitors, along with a higher screen resolution.

GRAPHICS: The Jaguar has its custom Graphics Processor running at 27 MIPS (millions of instructions per second) with 4K of internal Static RAM (SRAM) for faster data processing; this works with the BLITTER to perform programmable high speed graphics effects. The 3DO has twin graphics animation processors which organise graphics into animation cells for fast display updates. The Jaguar generates up to 850 million pixels of animation or rendering per second compared to the 64 million generated on the 3DO.

BLITTER: The Jaguar's BLITTER performs a wide range of logical operations at high speed, hardware support for Gouraud shading and Z-buffering, essential for generating 3D graphics in real-time. The DMA engine in the 3DO simply shifts blocks of memory about.





■ Otherwise known as *Humans*, 80 levels worth of *Evolution-Dino Dudes* makes the most of the brilliant colours and animation potential.

COMMENCE

Performance levels

Jaguar is due to be released to the New York and San Francisco public from October, the same month as 3DO plan to launch their machine, although the chances of that being achieved are apparently unrealistic – one developer commented: "If the 3DO Company make their October deadline it will be a miracle, honestly."

Both companies want to make their machines the industry standard – which will then sell millions of copies of games rather than just thousands. If this happens software prices will fall and make the machine more attractive to more people who consider the price of software to be prohibitive.

Trip Hawkins, President of 3DO suggests that: "You can't establish a standard if another manufacturer has a consumer device that's going to be better than yours next year. You have to provide a performance level that puts the stake way out there... then people don't bother to challenge it." Looks like Trip, er, just tripped up. As you can see from the anno-

tated diagram on the opposite page, Jaguar's performance significantly outweighs that of 3DO – and 3DO's comparatively high price is inevitably going to put significant numbers of people off.

Sam Tramiel, president of Atari, commented: "We believe that we have taken a more substantial jump than 3DO has in bringing a better and more affordable entertainment experience to the consumer market." All this is very well in theory but we have yet to see how the machines shape up when they're eventually released to the public.

Games more games

The first games to be released for the Jaguar are likely to be from Atari themselves and will feature lots of 3D rendering, 24-bit graphics, scanned and digitised images of people, texture mapping, lighting and shadowing effects. Some of the games include *Crescent*



■ A showcase game for the Jaguar, *Raiden* excels in the speed and graphical departments. Atari claim that it comes closer to the original arcade version than any other console manages.

Galaxy, Cybermorph, Raiden, Evolution-Dino Dudes, Club Drive, Chequered Flag 2, Tiny Toon Adventures, Alien vs Predator, Kasumi Ninja and Tempest 2000. We've got hold of screenshots of some of the Jaguar games – enjoy them at your leisure.

So if that's whetted your appetite, make sure you get your copy of *STF* next month when we should be bringing you many more details of this brilliant new machine. **stf**

BUT SERIOUSLY...

Atari enthusiasts and developers gathered at the Le'ST Get Serious Show to get together and see the latest hardware and software developments for the ST and Falcon.

The show was held at the Novotel in Hammersmith and was well attended considering that the event was only publicised two weeks prior to the show date. It was a wonderful opportunity for ST owners to meet each other and talk to developers and experts alike, and also be able to buy the latest serious software – there was even a free fitting service for hardware

■ *Xenomorph* has been rewritten to use GEM and be made MultiTOS compatible. Its new incarnation, *Xenomorph 2*, has a host of added new options including Polygon, Gouraud and Phong rendering and many new textures. Priced at £99 it should be available soon from 16/32 Systems.

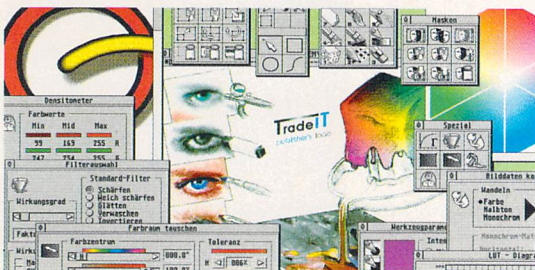
upgrades purchased at the show, as long as you took your ST with you.



The show was attended by CGS ComputerBild, Titan Designs, Compo Software

– who represented the ST Club and System Solutions, 16/32 Systems, Sinister Developments, Warpzone PDL and Gasteiner Technologies. All of the companies were very pleased with the turnout and are looking forward to the next show. Atari were not in attendance but are expected to open the next one to be held, at Alexandra Palace on 26 September.

■ One stunning program on show was *Chagall* from CGS ComputerBild (☎ 081 686 8121). *Chagall* is a 24-bit true colour graphics package enabling photographic quality images to be processed and manipulated on a Falcon or TT. It will be available as soon as the program and manual are translated into English – likely at the end of this year.



SNIPPETS

Zone Distribution has collapsed!

The distributors of Dr T's music software, Zone Distribution, have ceased to exist. Their distribution network has been handed over to Key Audio Systems (☎ 0245 344001) and the support system has gone to Avalon Music Developments – call ☎ 081 699 7004 if you want to know anything about the *Omega 2 Composition System*, including how to upgrade to *Omega 2* and how to join the Omega Users Group.

Please contact Avalon Music Development if you use Dr T's programs to confirm your name is on the user database.

Easy money?

Keep track of where you spend your hard earned cash with *Easy Money* and *Easy Money Plus* from Orpheus Systems.

Both packages enable you to keep home accounts with over 80 expense categories and up to 5,000 transactions in memory. The *Plus* version also enables you to generate graphs and use macros. *Easy Money* costs £24.95 with the *Plus* version costing £39.95. Call Orpheus Systems on ☎ 0424 436674 and watch out for the review soon in *STF*.

Atari sound the all clear

Remember the infamous DMA chip problem that occurred with some STes? Atari now say the last machine in the batch of 200 with a faulty DMA chip has been recalled and repaired, so if you have an STE don't worry about having a dodgy DMA chip or not, because you haven't.

Plug in and go

You can upgrade your 1MByte Falcon to 4MBytes or 14MBytes with FalconWINGS, a plug-in memory board from System Solutions. The board is available in unpopulated, 4MByte or 16MByte versions and plugs into the Falcon's memory expansion slot – you don't need to modify the case or shield, the SIMMs tuck under the shielding. The unpopulated board costs £59.95, 4MBytes board is £269 and the 16MByte board costs £799. Call System Solutions on ☎ 0753 832212.

First steps into the ST market

Binary Asylum, one of the country's newest software houses, enters the software industry with the release of *Zeewolf* on the ST. *Zeewolf*, described as being a cross between a shoot-'em-up and an adventure game, is likely to be released after Christmas. The company's interest in the ST market suggests a strong belief in the platform and its longevity – and rightly so.

FREE COPIES OF THE BEST OF ST FORMAT

That's right, we're feeling exceptionally generous this month and are offering you the chance to get hold of the book *The Best Of ST FORMAT*, which is worth £9.95, totally free.

All you have to do is turn to page 45 and fill out the coupon, reserving your copy of *ST FORMAT* for at least the next four months and your newsagent will receive a copy of *The Best Of ST FORMAT* for you to collect next time you go in to collect your magazine.

The book's absolutely brilliant – it's packed with lots of features introducing you to all aspects of

the ST, there are pages and pages of techie tips in *ST Answers*, a huge jargon busters section, a buyer's guide and indexes to virtually everything you could possibly want to know about *ST FORMAT*. Since the chances are you're going to be buying the magazine every month anyway, why miss out on this great offer – get down to your newsagent's and place your order to ensure you don't miss out.

Of course, if you subscribe and would still like the book, turn to page 98 and order it from our special offer pages.



Some things in life are essential - this is one of them. And it's free!

SNIPPETS

Get a free memory upgrade!

Order Graham Gooch's World Class Cricket and you'll get a cheque for £10 to put towards a memory upgrade for your ST or STE. The first 1,000 ST owners to call 081 424 2244 and order the game, which scored 85% in *STF* 47, before the end of the year will get the cheque, so hurry!

STE prices slashed

Now's your chance to upgrade from an STFM to an STE with the latest in a series of price cuts for Atari's range. Silica Systems have dropped the prices of their 1040 STE packs, *Family Curriculum 2* and *Music Master* from £249 to £199 in an effort to stimulate pre-Christmas sales.

This move precedes Atari's announcement that the recommended retail price is going to drop to that level. They've also upgraded STEs to 4MBytes of RAM, creating the 4160 STE which they're launching at £299.

Gigamem rules!

Sega's aim for world domination continued when they decided to take legal action against small time company Gasteiner over the name Mega Drive – only in Gasteiner's case it just happened to refer to their long held brand name for their hard drive rather than a console back in issue 46. Suggestions for new names for the hard drive poured in to us in their hundreds, along with suggestions for logos and advertising design. The story touched you – or perhaps it was the thought of that hard drive up for grabs that encouraged you. We submitted all the entries to Gasteiner who chose the name "Gigamem" from the suggestion of John Payne from London SE19. Presumably they liked the idea of hugeness represented by the word "Giga" (literally 10⁹) as opposed to mega (literally 10⁶) and the "mem" bit just reminds you that it's memory. Probably.

Get to grips with Creator and Notator

If you want to discover the potential of the *Creator* or *Notator* music packages, why not consider giving Peter Dudley a call? He's offering individual tuition courses in the comfort of your own home – give him a call on 081 539 9729 for more details and prices.

Apologies go to...

Gary Bracey, Ocean's Development Director, whom we inadvertently misnamed last issue.

Office moves

zSoft are moving offices to 114 Sparth Road, Clayton Le Moors, Lincs, BB5 5QD. Their new phone number is 0254 386192.

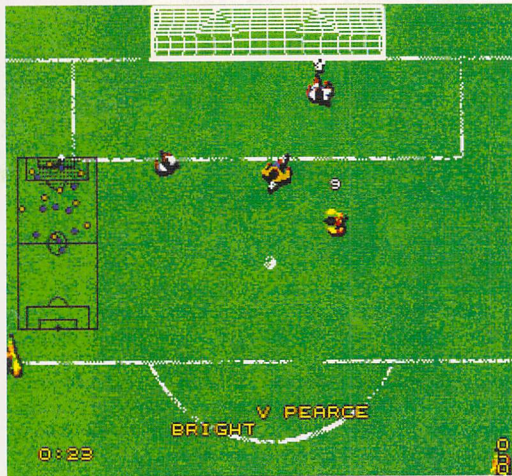
OCEAN GOES FOOTY MAD

Software giants Ocean have lined up two major football games for your STE to be released this autumn.

European Champions is an arcade game featuring all the major teams from the European Premier Leagues and includes ten skill levels and total video control, so you can replay, rewind or freeze frame your favourite footy moments. *Superleague Manager* on the other hand enables you to take a more cerebral approach to the game as you guide your team to success through your skills as a manager and strategist. If you

own both games, there's the added bonus that the matches thrown up by *Superleague Manager* can be played out on *European Champions*. It looks like a great package.

European Champions is due for release at the end of October, with *Superleague Manager* a month later. Both games are priced at £25.99 each. Ocean can be contacted on 061 832 6633.



European Champions is an extensively reworked version of Ocean's FA Premier League game seen here, is it as good as Dino Dini's Goal?

YOU CAN STILL WIN £100

We gave you the chance to win £100 when we gave away the *Persistence of Vision* ray-tracer on the *STF* 49 Cover Disk – and we're extending the closing date for entries so that even more of you have the chance to win all that lovely cash.

Just turn to your copy of issue 49 and the follow up feature in issue 50 (turn to page 50 to order your copies if you missed them) and get raytracing. The same rules apply as before except that now you've got another few weeks to send in your entries – up until the last post on Friday 17 September, in fact.

So encourage all of your creative juices to flow freely and get tracing.



RAM PRICES ON THE UP

Memory costs are rising dramatically because of a fire at the Matsushita factory in Japan. The factory was the source of approximately half of the world supply of a special epoxy resin used to make integrated circuit chips, including memory chips and SIMMs.

The factory was completely destroyed; experts estimate that there was a three month stock reserve of all major IC components world-wide – and it's likely to take between six months and a year for

the factory to resume full production again.

Some manufacturers have already noticed a sharp increase in the cost price of the 9-bit SIMMs used in PC clones, with a 1MByte module now costing as much as £55 – apparently SIMMs are in extremely short supply already. This increase is bound to be passed on being reflected in higher prices for many goods that use any type of IC chips, including things like TVs, VCRs and hi-fi equipment as well as computers. ST RAM

upgrades using SIMMs are already rising in price. Brian Cobley, manager of the First Computer Centre told us, "We are continually sourcing the best prices for our new supplies of SIMMs, we hope that prices will stabilise soon and even start to fall after a few months. Our current price is between £60 and £70 per MByte but we recommend that anyone thinking of upgrading their machine should call for current prices." You can contact the First Computer Centre on 0532 319444.

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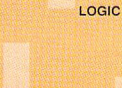
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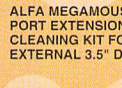
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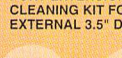
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MIRAGE SIGNS THE RIPPER

The legend of London's most famous serial killer lives on in the latest adventure game from Mirage.

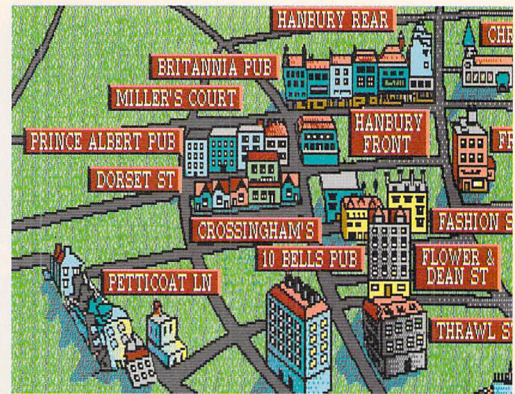
Programmed by Ezra Sidran – developer of the Universal Military Simulator – *Jack the Ripper* embroils you in a world of double-standards, sleazy ale palaces and gruesome death. You play a lone detective on the trail of the mysterious perpetrator of a series of grisly murders in the East End.

From the Frying Pan Pub to Petticoat Lane, the Ripper leaves plenty of clues and eyewitness reports as testimony to his evil.

The fun doesn't end there – even if you manage to track down the Ripper and bring him to book, the next time you play all the clues and characters have changed. It's just like being Sherlock Holmes every day of your life.

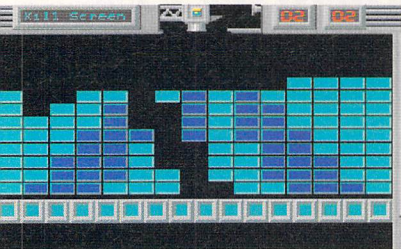
The graphics look a bit hammy, but the whole thing's been

incredibly well-researched and contains a wealth of historic characters and locations. Mirage expect to release the game either at the end of this year or early in 1994 – it will be priced at £34.49; keep your eyes peeled for *ST FORMAT*'s definitive review. In the meantime, phone Mirage on ☎ 0260 299909 for more details.



■ Fear and loathing on the streets of London. Could you be Jack the Ripper's next victim?

WALZING MATILDA



■ It's Bunny Bricks without the bunny! Walz is another Breakout-clone for block-bashers everywhere. You have been warned.

Does the world need another Breakout clone? 'Fraid so. And US company Computer West are about to prove it with the release of *Walz* on the ST, TT and Falcon.

Walz is, er, a *Breakout* clone featuring 50 levels of block-bashing

mayhem. Basically you have to deflect a madly careering ball using a mouse-controlled paddle. The ball crashes into a series of blocks occasionally releasing bonus objects or power-ups for you to collect. The object of the game is simply to clear all the bricks from each level before moving onto the next. It's hardly original, but is likely to have you glued to your ST long after the latest platform sensation has come and gone, especially with the *Mason: Walz Game Creator* which enables you to create your own levels.

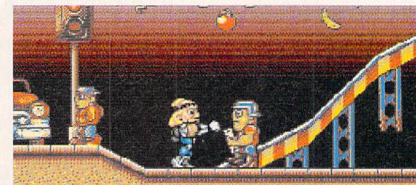
At the moment the game is only available from Computer West direct, so give them a call on ☎ 010 805 546 9036 or write to them at PO Box 12345, San Luis Obispo, California 93406, USA.

HULK HOGAN IS SUBURBAN COMMANDO

From *Rocky 3* to *Mr Nanny*, it's been uphill all the way for WWF Superstar Hulk Hogan (cough). Now he looks set to consolidate his success with a plum role in *Alternative Software's* latest platformer.

Suburban Commando is the tale of one man's triumph over adversity. Yes, despite an incredibly silly moustache, Hulk has decided to take on a bunch of bounty-hunting alien baddies who've infiltrated each of *Suburban Commando's* four levels. Level One finds Hulk launching SAM missiles at the Alien Mothership, while Level Two has him battling vicious robots inside the ship itself. Level Three is set on the streets of Los Angeles and

Level Four features helter-skelter rubbish chutes and demolition balls. *Suburban Commando* is set for release at the end of September, price £24.99. All copies of the game include a free VHS video of the film on which the game is based. Phone *Alternative Software* on ☎ 0977 797777 if you need any more info.



■ Hulk Hogan makes a return to your ST in the electronic version of his movie *Suburban Commando*.

THE TOP TWENTY

Your guide to the top-selling ST games throughout the UK

This month	Last month	Game	Publisher	Price	STF Rating
1.	(4)	Sensible Soccer 92/93	Renegade	£25.99	91%
2.	(1)	Chaos Engine	Renegade	£25.99	94%
3.	(2)	Lemmings 2	Psygnosis	£29.99	96%
4.	(5)	Pirates	Kixx XL	£12.99	74%
5.	(3)	Championship Manager '93	Domark	£29.99	80%
6.	(8)	Street Fighter 2	US Gold	£27.99	91%
7.	(19)	The Simpsons	Hit Squad	£9.99	74%
8.	(6)	Premier Manager	Gremlin	£25.99	85%
9.	(7)	Addams Family	Hit Squad	£9.99	74%
10.	(-)	WWF Wrestlemania	Hit Squad	£9.99	63%
11.	(11)	Prince of Persia	Hit Squad	£7.99	90%
12.	(14)	Civilization	Microprose	£34.99	92%
13.	(12)	First Division Manager	Codemasters	£7.99	64%
14.	(18)	James Pond 2: Robocod	Kixx	£9.99	86%
15.	(-)	Hero Quest	GBH	£9.99	74%
16.	(-)	Manchester United Europe	Buzz	£9.99	77%
17.	(16)	RBI 2 Baseball	Hit Squad	£7.99	62%
18.	(-)	Campaign	Empire	£34.99	20%
19.	(10)	B-17 Flying Fortress	Microprose	£34.99	87%
20.	(13)	F-19 Stealth Fighter	Kixx XL	£16.99	96%

There are four new entries – but no new releases – in this month's Top Twenty. Hulk Hogan and his pals make their budget debut at number ten, knocking poor old *B-17* to the bottom of the table. *Sensible Soccer* also makes an unexpected surge and steals the number one slot back from its stablemate, the *Chaos Engine*.

EMPIRE'S MAGIC PLATFORM

Empire follow up the success of their *War in the Gulf* battle sim with a new platform game called *Magic Boy*.

Magic Boy tells the story of a mischievous apprentice wizard called Hewlett who's been left in charge of his master's home. Unfortunately, Hewlett has released hordes of spell-casting monsters and calls on you to help

him lock them up again before his master gets back.

There are 64 platform-packed levels for you to explore with plenty of power-ups and bonus objects lying around to make rounding up the baddies that bit easier. The game features colourful parallax scrolling, sampled sound and a two-player mode.

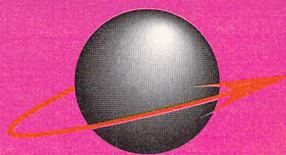
Magic Boy is set for release

in October, price £25.99. Give Empire a ring on ☎ 081 343 7337 for more info.

■ The Sorcerer's Apprentice arrives on your ST in the guise of *Magic Boy*, the hot new platformer from Empire Software.



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ST ACTION 94%

ST USER 93%

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DYNABLASTER From Ubisoft

ST ACTION A1 RATED 92% "The most addictive thing since Rainbow Island". (includes adaptor for up to 5 player game) Place your bombs to protect yourself in this totally mind blowing game. "In one player mode, it's a massive and addictive task but in head to head, with 5 players, this is truly awesome" CVG

ST FORMAT GOLD AWARD 92%

VOTED BEST MULTIPLAY GAME OF THE YEAR

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D/GENERATION From Mindscape

Virtual Reality meets Action Adventure in this innovative game. Over 120 rooms filled with traps and surprises, unique storyline and humourous animation all go to make this game to savour. "D/Generation has everything every game should have". ST ACTION

ST ACTION A1 RATED 93%

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PREMIER MANAGER From Gremlin

Could you be the next Graham Taylor? Find out if you've got what it takes to run a football team with this sophisticated strategy game. Features include Cup competitions, Sponsorship deals, 1-4 players and Transfers. "It's easy to pick up and easy to play. Best of all it's easy to get into" ST ACTION.

ST FORMAT 85%

ST ACTION 82%

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R.R.P.

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ARMOUR-GEDDON From Psygnosis

ST ACTION: "Don't find time to play Armour-Geddon, Make time". Can you save what's left of humanity from a deadly new weapon? Control up to 6 vehicles at once, build up your arsenal and help create your own new weapon system. Also features a serial link option for head to head action

ST ACTION 90%

£25.99
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half price!

TIMEWORKS 2 From GST

Timeworks was probably the world's most popular DTP package for the ST; now TIMEWORKS 2 is available "an excellent buy for both beginners and experienced users alike" ST USER. It's faster and more efficient and has a range of extra fonts. All in all a terrific package.

£129.95
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Much less than
half price!

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LEMMINGS 2 THE TRIBES (1 MEG)		15.99	
DYNABLASTER (1 MEG)		16.49	
D/GENERATION (1 MEG)		10.99	
PREMIER MANAGER		13.99	
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COVER DISK 51

There are 1.5MBytes of goodies on this month's Disk, so what are you waiting for? Load up! Clive Parker shows you the way

Fractal Playtime

BY: RICHARD HODSON

RESOLUTIONS:

ALL RESOLUTIONS

MINIMUM MEMORY: 512K ON COLOUR MACHINES, 1MBYTE IN HIGH RESOLUTION MONO

FILES: FRACPLAY.TOS

UNCOMPRESSED SIZE: 228K

READ: FRACPLAY.TEX,

READ_ME

GET STARTED WITH: SEE BELOW

FALCON 030 AND TT

COMPATIBLE

Fracplay is about the fastest and most colourful Mandelbrot generator ever seen on the ST, and as a bonus it works on all of the ST range up to and including the Falcon and TT in 256 colour mode.

To fit *Fracplay* onto the Cover Disk we have compressed it into a self-extracting archive. Have a blank formatted disk ready and copy FRACPLAY.TOS onto it, this is your working disk. Now double-click on the copy of FRACPLAY.TOS on the working disk to unpack all the files; after a few minutes all

This month's array of software starts here

Zool - Ninja of the Nth Dimension

Playable demo of *Zool*, the frantic platform game from Gremlin.

Uncompressed size: 363K

Page 13

■ Check out the main review starting on page 69.

Fracplay

It's playtime at the fractal factory with this brilliant Mandelbrot manipulator.

Uncompressed size: 228K

Page 12

■ Fractals galore with Elegant Chaos on page 40.

Talking clock

Click on the talking clock Accessory and your ST speaks the time.

Size: 35K Page 16

The Missing Link

The ultimate *STOS* extension, over 50 new commands to supercharge *STOS Basic*.

Uncompressed size: 500K

Page 16

■ For more of your *STOS* queries and the answers turn to *ST Answers* on page 58.

Prensorium

50 excellent levels of machine code mayhem with this compulsive puzzler.

Size: 175K

Page 14

ViewPic

Display and print *Degas* pictures from within any GEM program using this nifty Desk Accessory.

Uncompressed size: 154K

Page 16

2.5MByte STE

They said it couldn't be done, and we said so too. But we were wrong! Now you can install 2.5MBytes of SIMMs into your STE using this software patch.

Size: 25K Page 16

Z-Folder

Incredibly useful utility that enables you to create new folders from within applications using this high resolution Desk Accessory.

Size: 20K Page 14

Cover Disk Back-Up

The perfect way to safely back up your precious Cover Disk with the minimum of fuss. Excellent stuff – just make sure you use it!

Size: 13K Page 16

of the files are decompacted and ready to use.

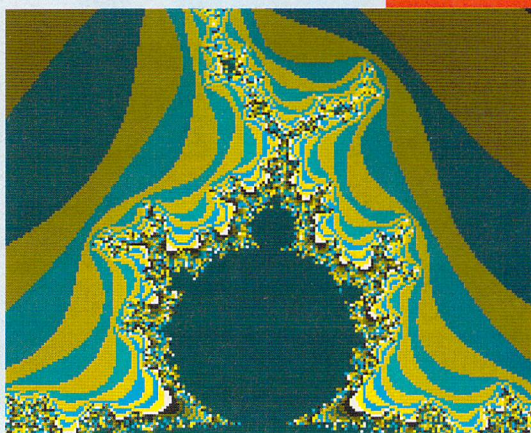
You can now delete FRACPLAY.TOS from your blank disk. To

run the program, double-click on PLAY.PRG and you are now ready to delve into the wonderful wibbly world of fractals.

Using the program

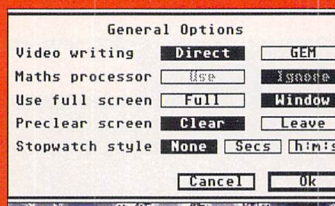
Using *Fracplay* is simple, a standard Mandelbrot set is generated in a window as soon as the pro-

Fractal features

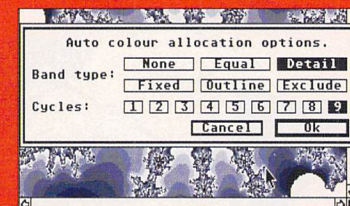


■ Zooming in to the top of the Mandelbrot image shows the incredible detail contained in the picture.

You can manipulate the fractals in many ways from the Options menu to create different and more interesting versions of the fractal



■ Direct video writing is a faster method than GEM and *Fracplay* automatically selects it unless you're using a non-standard graphics card. If you have a maths coprocessor in your machine it can be toggled from here, pictures can be generated in windows of full-screen fractals and you can set up *Fracplay* to clear the screen before you draw a new picture. You can set a stopwatch to see how long it takes to generate the fractal.



■ The boundary function determines how colour is assigned to the Mandelbrot set. Each of the band types produces a different version of the image, Detail displays only the detailed areas of the set with large bands of colour disregarded, Outline shows the central part of the set enabling interesting areas to be selected and Exclude is designed for mono monitors, Cycle determines how many times the palette is used to create bands of colour.

Before you take even one step further, read this carefully

Tread carefully

To keep your *STF* Cover Disk safe, write-protect it by moving the black tab so you can see through the hole. Nothing can now be written to your Disk. Write-protection also keeps your Disk safe from viruses.

Study the map

Space on the Cover Disk pages is limited, so you may find text files for some programs on the Disk. These

have the file extension DOC. It's always a good idea to read these for more information on a program. Double-click on them and select Show to display the text. If text disappears off the screen when you try to read a DOC file in low res, change to medium resolution and try again.

Avoid the pitfalls

To keep your *ST FORMAT* Cover Disk safe you should make a backup, so if

anything goes wrong, you still have the original. Because we use a special disk format to squeeze programs on to the Disk, you can't do a direct disk to disk copy. We've made life easy for you, however, with this *Back-up* program. Follow the instructions on page 16 and you can't go wrong. Now there's no need to risk damaging or losing your disk again!

Some programs are compressed to fit on the Disk and cannot be run

directly from it. Follow the instructions here and it'll all be fine.

Is your drive obsolete?

We use a double-sided disk format. If you own a single-sided drive, you can't read *STF* Cover Disks, or much of the new software since single-sided drives are obsolete.

You are strongly advised to buy a new double-sided drive which can cost as little as £35.

Zool

BY: GREMLIN GRAPHICS

RESOLUTIONS:

LOW RESOLUTION ONLY

MINIMUM MEMORY: 512K

FILES: ZOO.LTOS

UNCOMPRESSED SIZE: 364K

GET STARTED WITH: SEE BELOW
JOYSTICK REQUIRED

Zool, the cool Ninja Ant, finally makes it onto the ST. Zip around this playable demo level of one of the most eagerly awaited platform games for years. The *Zool* demo is so large that we've compressed it

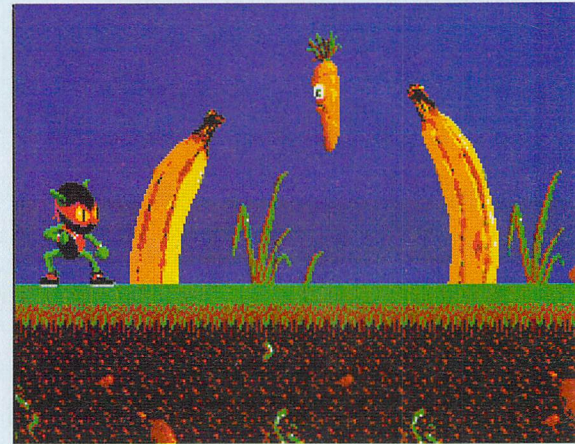
into a self-extracting archive to fit it onto the Cover Disk.

Get a blank formatted disk ready and copy the ZOO.LTOS file onto it. Run ZOO.LTOS and wait for a few tense, expectant moments while everything decompresses itself, when it has all finished doing its stuff press <Return> to get back to the Desktop.

To run the program, open the ZOO folder you've just created and run ZOO.LPRG, the *Zool* demo now loads and runs. Use your joystick to attack anything and everything that moves and run over sweets and fruit you find lying

about; you only have a limited amount of time so get leaping! For more details about special tactics and things to look out for turn to the review on page 69.

■ He's here, he's a Ninja and he's an ant. *Zool* bursts onto your ST's screen in a blaze of strangely behaving carrots, bananas and mixed veg.



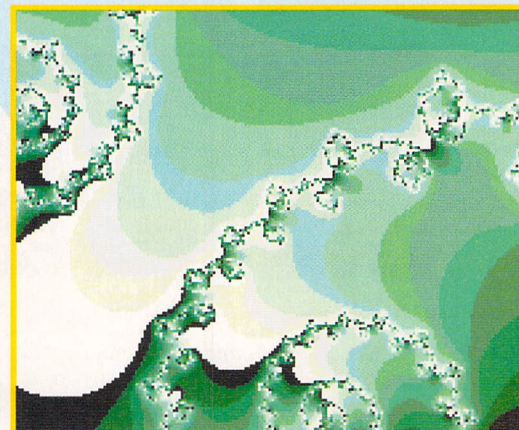
gram has loaded; when the mouse pointer appears you can start to explore the image. To zoom in, use the left mouse button to drag a box around the area you want to magnify and press <Return>. The program now recalculates the picture on-screen, if you want to halt a calculation just press the right mouse button until the pointer reappears.

You can zoom in as many times as you

like, there is always another layer to explore deeper into the fractal.

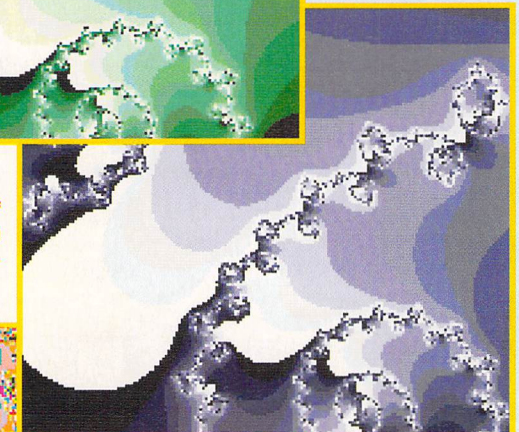
Once you have explored the standard Mandelbrot set you can look at some of the other examples included on the disk – there are 18 in all. Take a look at the SQUIGGLY.CO and TWIRL.CO files, they really are spectacular. Changing the palette colours can also result in some outstanding pictures. Most of all, play with the program and enjoy yourself.

■ Mandelbrot didn't know what he'd started when he generated the first pictorial representation of chaos theory, the Mandelbrot set.

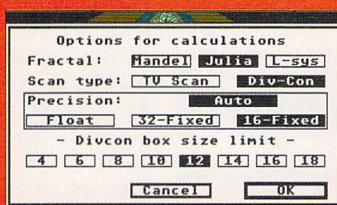


■ Changing the palette can change the way a fractal looks, part of the Twirl fractal in a minty green shade...

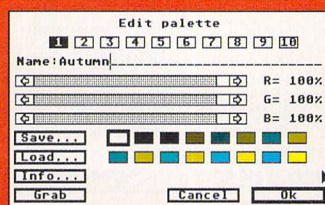
■...the same portion of Twirl in a relaxing cool blue mode...



■...and finally the same fractal in psychedelic multi-coloured mode.



■ *Fracplay* uses two methods of calculation at three different precisions, these can be mixed and matched for different results. Leave Precision Set on Automatic, your ST knows what's best. Fractal type is obvious; choose between Mandelbrot, Julia and L-sys fractal generation methods. Scan Type is the method by which the image is generated on-screen, TV Scan is faster on a TT or Falcon than on the ST while Div-Con is faster on the ST.



■ *Fracplay* has ten palettes built-in, you can switch between them using the function keys or use Edit Palette in the options menu. In the Edit Palette menu you can adjust individual colours in all ten palettes and save your own customised palettes to disk. Changing palettes can greatly enhance the way a fractal looks. Because *Fracplay* is GDOS compatible you can print out your fractals if you have GDOS installed.

Prensorium

BY: MARTIN GIBBINS

RESOLUTIONS:

LOW RESOLUTION ONLY

MINIMUM MEMORY: 512K

FOLDER: PRENS

FILES: PRENS.PRG, PRENS.DAT, PRENS.DOC

SIZE: 175K

READ: PRENS.DOC

GET STARTED WITH: PRENS.PRG

JOYSTICK REQUIRED

You are a little four-wheeled tank perched on the top of a towering latticework of girders, you can only move around on a maze-like track made up of tiles. Once you've adjusted your brain to this change of identity, you find yourself at the start of 50 levels where you have to entice enemy devices to follow you and destroy themselves by passing over mines, traps and other goodies. Beware of driving over the edge and of the enemies catching you, because if they touch you, you die.

The object of the game is very simple; get them before they get you. It's the simplicity of this game that makes it so enjoyable, there are different types of tile that you can pass across but the enemy can't, you can pick up and lay traps and generally whizz about and have a good time. Be speedy but careful, there is a time limit on each level, if you don't clear the enemies in time, random bombs start exploding around you. When you've cleared a level, return to your starting position and

All about those special tiles, traps and mines

The tiles

- 1** Plain blue tile: ordinary tile.
- 2** Indestructible tile: blue tile with bolts in each corner.
- 3** Barrier tile: ordinary tile with yellow flashing barrier, you cannot pass by the barriers.
- 4** Broken tile: once you've passed over this the tile falls away, so don't park on this one.
- 5** X tile: enemy's initial starting position.
- 6** Forcefield tiles: moving coloured squares on these, you have to collect the right key to pass over them.
- 7** Blocker tile: tile with a dome on it that can be picked up and replaced, blocks enemies.
- 8** Direction restrictor: plain tile with arrows; you can only move in the direction of the arrows.
- 9** Teleport tiles: tile with pads, activate with the fire button.

- 10** Home base: start and finish here, press Fire if you want to go to the next level.

The pick-ups

- 11** Mines: yellow flashing mine symbol which gives you five extra mines.
- 12** Score bonus: yellow flashing question mark which increases your score.
- 13** Forcefield keys: coloured circles where the correct colour opens the forcefield.

The traps

- 14** Lava pits: enemies only pass over a lava pit if they spot you, you can pass over them safely.

- 15** Two-piecer: pieces must be same colour to kill enemies.

Goodies and baddies

- 16** Tank: this is you.
- 17** Enemy: anything that moves, may not look like this.

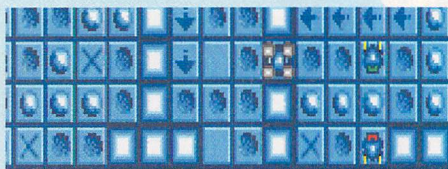
Tints 'n' hips

If an enemy spots you he heads for you at top speed, use this to force him over a trap.

Pause the game and study the screen by pressing <P>, press again to restart.

Enemies cannot pass over parts of two piecers.

press Fire to go to the next level and get the level password.



■ Level 49 of Prensorium, if you can get this far you're good. Very good indeed.

Z-Folder

BY: DIGITAL DESIGNS

RESOLUTIONS: HIGH

RESOLUTION ONLY

MINIMUM MEMORY: 512K

FOLDER: ZFOLDER

FILES: ZFOLDER.ACC, ZFOLDER.DOC, ZFOLDER.ACX

SIZE: 20K

READ: ZFOLDER.DOC

GET STARTED WITH: SEE BELOW

Z-Folder is a Desk Accessory enabling you to create folders from within any program that provides access to the GEM menu bar, dead handy if you are using a program like *First Word Plus* that has no built-in folder creation facility.

To use the Accessory, copy the ZFOLDER.ACC file from your Cover Disk to the root directory of your boot disk – that is, not in a folder. Now reset your ST and Z-Folder is loaded into memory. Select Z-FOLDER from the Desk menu and the *Z-Folder* window appears. Type the name of your

new folder into the window; you can specify a path if you like but *Z-Folder* defaults to the current path held in memory. Then press <Return>. You now have the option to create the folder or to exit if you have made a mistake.

If you don't want to create a folder after calling *Z-Folder* then just press <Return> without enter-

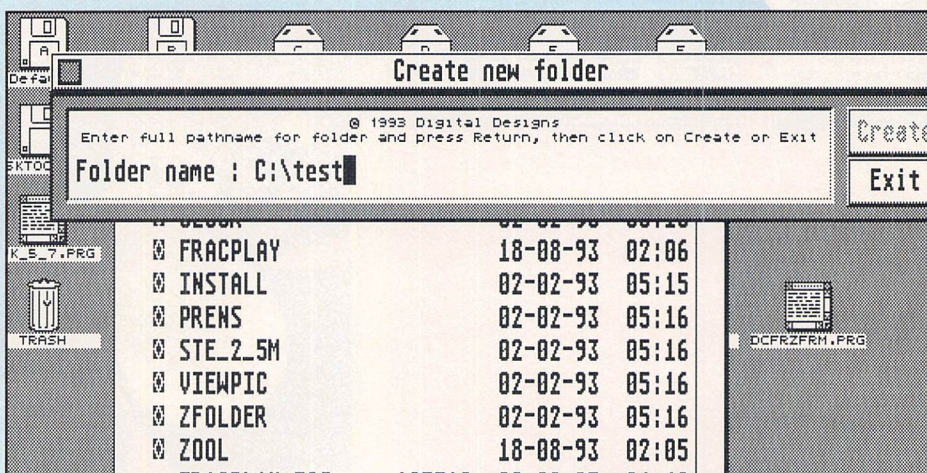
ing a folder name. You may now exit from the Desk Accessory by clicking on the Exit button or the close window device at the left of the title bar.

There are two versions of the program on the disk, ZFOLDER.ACC is simply a compressed version of ZFOLDER.ACX, you may use either version. One other fea-

ture of *Z-Folder* is the ability to enter "illegal" characters in folder names by using <Control> <A> followed by the ASCII code of the character or by using <Control> and <Alternate> along with any keyboard character.

A word of warning, never use a question mark <?> as part of a folder name, this seriously baffles

your ST. Lower case letters also cause confusion on versions of TOS above 2.05.



■ Entering text in lower case is perfectly fine, the folder name appears in upper case letters. The Create button is greyed out until the <Return> key has been pressed.

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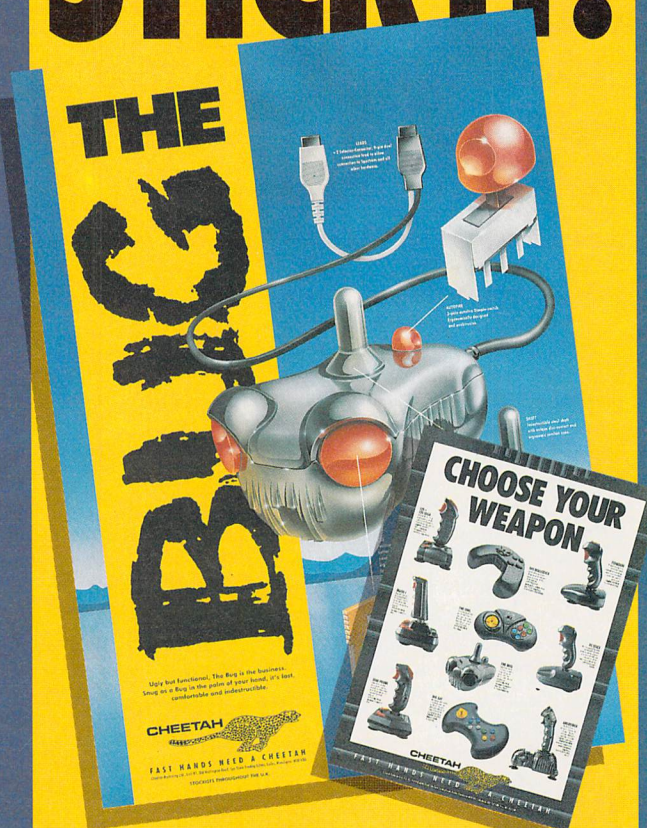
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ST FORM OCTOBER 93

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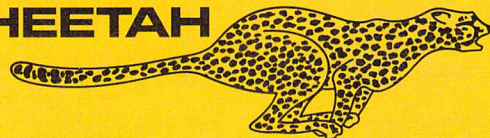
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The Missing Link

BY: TOP NOTCH
RESOLUTIONS:
ALL RESOLUTIONS
MINIMUM MEMORY: 512K
FOLDER: INSTALL
FILES: INSTALL.PRG,
INSTALL.DAT, INSTALL.RSC,
INSTALL.DOC
UNCOMPRESSED SIZE: 338K
READ: INSTALL.DOC
GET STARTED WITH: SEE BELOW

STOS gets the commands it deserves with *The Missing Link* extension, with over 50 new **STOS** commands from the creators of the *Misty Extension*.

Because the extension is so big, Top Notch have compressed all the data into a special installation program which decompresses the BASIC command extension, the compiler extension, the document files, programs and examples. Get a formatted blank disk ready and

Some of those new commands

There are too many new commands in the Missing Link to list them all, but here are some of the highlights. Full details of all commands and what they do is contained in the LINK.DOC

Sprite commands

BOB: The **BOB** command replaces the **SPRITE** command and is so much faster that there is no comparison with the original. You can now display about 25 16 x 16 sprites at once.

JOEY: **JOEY** is similar to the **BOB** command and is designed for use

with single colour sprites; these are perfect for small, fast moving sprites like bullets or missiles.

Mapping commands

WORLD: Used to create multi-directional scrolling maps.

LANDSCAPE: Use **LANDSCAPE** to display vertically scrolling maps for shoot-'em-ups.

SET BLOCK: Used to set a block in the map, can be used in conjunction with the **WHICH BLOCK** command to erase blocks from the background which have been picked up or destroyed.

Text commands

TEXT: Direct replacement for the **PRINT** command, and faster.

GFX (Graphic effects) commands
WIPE: A very fast clear screen command twice as fast as **CLS**. Also use to clear memory banks.
TILE: Fills the screen with 16x16 pixel tiles, very fast.
MOZAIC: Similar to **TILE** except it is used to fill windows rather than the screen.

Palette commands

PALT: Gets the palette from **MBK** files.

PALSPILT: Splits the palette on-screen so there are different colour palettes in different areas of the screen, enabling you to use more than 16 colours for a screen.

copy the Install folder onto it. Run **INSTALL.PRG** and wait for the main menu to appear; there are five sections to install altogether and each must be installed separately by selecting them from the menu. All you have to do to install a section of the extension is click on its option in the menu, the sec-

tion is decompressed in memory and then written to disk.

You don't even have to save the extension to the same disk as the installation program – because the install program is held in memory you can change disks and save the extension to a different one. Remember, if you want to install all

parts of the *Missing Link* to one disk you need 340K of space, the installation program doesn't check to see if there is enough room.

STF Warning: The installation program only works on 512K STs if there are no Auto programs or Desk Accessories installed.

Cover Disk Back-Up

BY: BRIAN TILLEY
RESOLUTIONS:
ALL RESOLUTIONS
MINIMUM MEMORY: 512K
FOLDER: BACK_UP
FILES: BACK_UP.TOS
SIZE: 13K
GET STARTED WITH:
BACK_UP.TOS

One thing you don't want to do is lose all the brilliant programs on your *ST FORMAT* Cover Disk by sticking it straight in the drive and mucking it all up, that's why we always put our brilliant backup

program on the Disk so you can safely make a copy to use without endangering your precious original. Remember, you should always make a backup copy of your Cover Disk – no skimping now!

We use a special ten sector format on our Cover Disk so we can squish more programs on it for you, this means that you can't use the ST's Desktop disk copy function to make your backup. You could copy all the folders and files to drive B but you'd end up making hundreds of disk swaps before you finished. The best thing to do is use the *Back-up* program, it's fast and makes maximum use of memory to reduce the number of disk swaps you need to make, if you have

1MByte of RAM then you don't have to make any swaps.

Write-protect your Disk. Slide the tab so you can see through the hole – nothing can be wiped from the disk. Run **BACK_UP.TOS** on your Cover Disk and select option 1 to start copying, have a blank disk ready and be prepared to swap disks when prompted.

The source disk is always the one you are copying, the destination disk is the one you are copying to. If you have an external disk drive then pop the source disk in drive A and the destination disk in drive B. You can use *Back-Up* to copy your other disks too, but don't try and copy protected game disks though, it won't work.

2.5MByte STE

BY: I HUSSAIN
RESOLUTIONS:
ALL RESOLUTIONS
MACHINE: STE ONLY
MINIMUM MEMORY: 2.5MBYTE
FOLDER: STE_2_5M
FILES: STE_2_5M.PRG,
STE_2_5M.DOC, STE_2_5M.C
SIZE: 25K
READ: STE_2_5M.DOC
GET STARTED WITH: SEE BELOW

Atari say it's impossible to use two 1MByte SIMMs and two 256K SIMMs in an STE to give you 2.5MBytes of RAM. Well, they're wrong, it is possible using this

small Auto folder utility. Remember that you need a 2MByte STE and two 256K SIMMs first.

Before you do anything physical to your machine you must create a boot disk and a backup boot disk, this is because you can use your 2.5MByte machine without the boot disk containing the program. Make an Auto folder on a blank disk and copy **STE_2_5M.PRG** into it; it must be the first program in the Auto folder, and then make a backup copy (or two) so that you always have several disks to boot your ST with.

Next you must take your STE apart and add the two 256K SIMMs into the two empty slots in your 2MByte STE; if you don't already have them then you can get a pair

for about £10 from most computer suppliers. Don't try this upgrade if you are not sure of what you're doing, and ensure your ST is disconnected from the mains first. After installing the SIMMs, put your machine back together.

To use the program put the boot disk in the drive and turn on your ST; a message is displayed on-screen and your STE resets. When the Desktop appears you have 2.5MBytes of RAM. To run an auto-booting game press <Control>, <Alternate> and <Delete> and insert the game boot disk.

ST FORMAT Warning: Opening your ST invalidates the guarantee, **ST FORMAT** cannot accept responsibility for any damage caused to any machine.

Talking Clock

BY: CHARLES L MCGUYER
RESOLUTIONS:
ALL RESOLUTIONS
MINIMUM MEMORY: 512K
FOLDER: CLOCK
FILES: TALKCLOCK.ACC,
STSPEECH.TXT,
STSPEECH.TOS, README.NOW
SIZE: 154K
READ: README.NOW
GET STARTED WITH:
SEE BELOW

View Pic

BY: QUENTIN RICE
RESOLUTIONS:
ALL RESOLUTIONS
MINIMUM MEMORY: 512K
FOLDER: VIEWPIC
FILES: VIEW_PIC.PRG,
VIEW_PIC.ACC, VIEW_PIC.DOC,
PICS.TOS
UNCOMPRESSED SIZE: 154K
READ: VIEW_PIC.DOC
GET STARTED WITH:
SEE BELOW

ViewPic is an Accessory designed to help you when you're using DTP or word processing packages when you need to quickly look at *Degas* pictures without leaving your program; you can also print pictures on Epson or Atari laser printers.

ViewPic is supplied as both a program and a Desk Accessory,

File commands

DLOAD and DSAVE: Enables complex file loading and saving so you can create archives and databases.

BANK LOAD and BANK SAVE: All your data for a game can be combined into one single file, so for example, instead of 20 separate files for 20 maps you would just have one file on disk.

Sound commands

DIGIPLAY: Used to play sampled sounds, this takes less processor time than *Maestro* and is far more comprehensive.

SAMSIGN: Converts samples between signed and unsigned

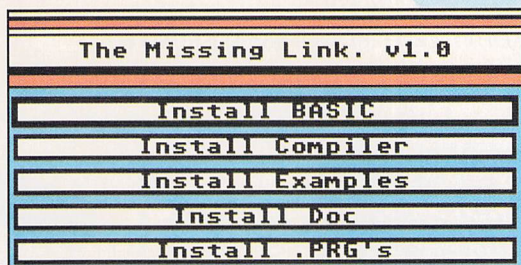
formats to enable samples from older samplers to be used.

MUSAUTO: Plays back music using interrupts in various formats. *Mad Max*, *Count Zero* and *Nexus* are among the music formats supported.

Other miscellaneous commands

DEPACK: Unpacks packed files created with common packers including *Atomik*, *Ice*, *Fire* and *Automation*.

REBOOT: Resets the machine and clears all data including RAMdisks and reset proof programs.



■ Installing *The Missing Link* is simple. Run the install program and select the part of the extension you want to install, then just listen to the music.

If you have a Falcon then your hard drive is graced with a snazzy talking clock Accessory. This delightful addition speaks the time at pre-determined intervals in a female American accent. Charles L. McGuyer was suitably jealous of this novelty and created his own talking clock Desk Accessory using the PD STSPEECH.TOS module that was originally supplied with the program *Fast Basic*.

Copy TALKCLOCK.ACC and STSPEECH.TOS to the root directory of a blank disk and then reset your ST; remember the speech

module must be on the same disk as the *Talking Clock* Accessory to enable the clock to speak. To hear the clock, go to the Desk menu and select *Talking Clock*, it now speaks the system time out loud.

If you don't have a built-in clock or a clock cartridge you have to set the correct time first using the control panel.

It's best to use the clock from the Desktop, if you use it from within a program it does work but your ST may crash if you use the clock again after you quit the program. Load it up and have fun.

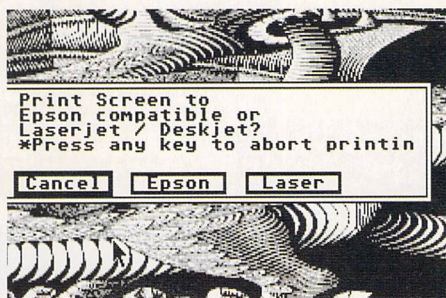
with three demonstration pictures to test the program. Because we have limited space on the Cover Disk the demo pictures have been archived in a self-extracting file.

To use *ViewPic* copy all the files in the *ViewPic* folder to the root directory – that is, not in a folder – of a blank disk. To extract the demo pictures run the PICS.TOS program and the pictures decompress in a couple of minutes. You can now happily delete PICS.TOS.

Now reset your ST with your *ViewPic* disk in the drive and the Accessory is loaded into memory; it takes up about 64K. Select PicView from the Desk menu and an alert box appears with three choices; Quit, Load and Show. Select Load and choose the demo picture to

match the resolution you are in, after the picture is loaded in memory select Show to view it.

Pressing the left mouse button brings up another alert box asking if you want to print the picture on an Epson or laser printer. Cancel returns you to your original alert box.



■ If you have an Epson compatible printer or an Atari laser then you can produce a hardcopy of your picture. If you haven't, then you can't. Sorry.

What's your problem?

1. This Disk won't load!

Before you do anything else, check your drive. If it's older than 1988, it's probably single-sided and cannot format any disk to more than 360K – this also means it can't read *ST FORMAT* Cover Disks. Single-sided drives are obsolete and it's well worth upgrading. Replacement drives are easy to fit and cost as little as £35.

So your drive's spanking new, or at least it's double-sided. *ST FORMAT* duplicates hundreds of thousands of Disks every month so, unfortunately, some are bound to be defective or damaged in some way. If the Disk just won't load, or you can't open a window at all, there's nothing in it, or the folder names are gobbledygook – the Disk is defective. It doesn't happen often, but please accept our sincere apologies. You're guaranteed a free replacement if you return the Disk to:

**ST FORMAT October Disk Returns,
PO Box 21, Daventry, NN1 5BU**

Enclose a sturdy self-addressed envelope (unstamped – we'll pay for the postage) and a brief letter explaining the problem. If you're worried about trusting your precious Disk to the mails, the Royal Mail's Recorded Delivery service costs only 55p on top of the normal postage.

Please don't send your defective Disk to any other address than the above one – we have no stocks of Disks at the Bath or Somerton offices.

2. I can't work out this Cover Disk program!

Your Disk seems OK; everything loads, but you've got a problem with one of the programs. Make sure you've read all the relevant Cover Disk pages and any document files on the Disk. Try consulting your ST owner's manual – that may have the information you need. Still got a problem? Then give us a ring on Wednesday afternoon. Telephone the *ST FORMAT* Cover Disk Hotline ☎ 0225 442244 on Wednesday between 2 – 6 pm only.

We don't write the Cover Disk programs ourselves and don't know as much about them as the programmers, but we'll do our best to sort your problem out. The above phone line is for Cover Disk problems only.

3. I have a problem with this other program I bought!

The best place to start is the distributor of the program. Most software houses run some kind of helpline service – check the information that came with your software for the number.

4. I've still got an ST problem!

If you've still got a problem, you suspect your machine may be faulty, or you need an answer to a more general query – then you have two options. (a) Ring the official Atari Helpline ☎ 031 332 93233 on any day from Monday to Saturday 6 pm – 11 pm or on Sundays from 8pm to 11pm. (b) Write to ST Answers, *ST FORMAT*, 30 Monmouth Street, Bath, Avon BA1 2BW – and let *ST FORMAT*'s team of experts tackle your problem in the pages of *STF*. Please could you indicate on the envelope what type of problem it is.

Share your creations with STF

We pay for your software – games, utilities, demos – anything good, original and short. If you've written anything worthy of appearing on *STF's* Cover Disk, send it with this form and full documentation to: Clive Parker, *ST FORMAT* Cover Disk Editor, 30 Monmouth Street, Bath, Avon BA1 2BW. Please be patient: we get absolutely loads of submissions, and we try to give them all a fair testing!

Name _____
Address _____
Daytime phone _____ Program title _____
Total size in K _____

On a separate sheet, explain concisely what the program does and why you happen to think it's so brilliant.

Remember to: ■ Include on-disk and paper documentation ■ Write your name and address on the disk ■ Use a virus-free disk ■ Keep a copy of your program, because contributions are non-returnable ■ Enclose an attractive bribe. Not that it makes a difference.

Please sign the following declaration: This program is submitted for publication in *ST FORMAT*. It is wholly my own work and I hereby agree to indemnify Future Publishing against any legal action should copyright problems arise.

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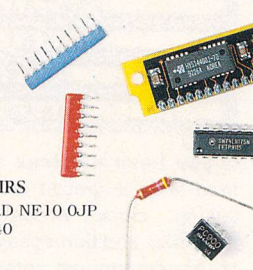
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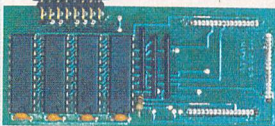


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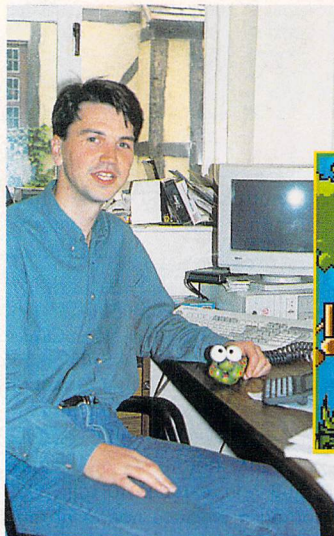
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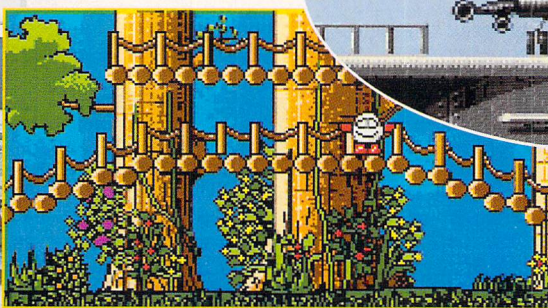
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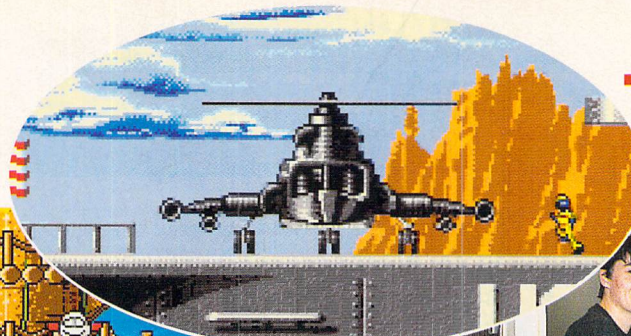
Games testers? Easy life. All they do is play games all day and get paid for it... or do they? Rob Mead lifts the lid on one of the best jobs in the software industry



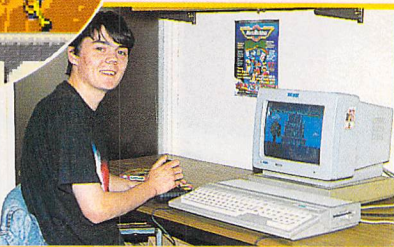
■ If you want a job, this is the man to talk to - Paul Anson is Codemasters' Software Development Manager.



■ Bubble Dizzy, Magicland Dizzy, Dizzy, Prince of the Yolkfolk - yes, you could play eggy games all day as a Codemasters games tester.



■ Fill in your Codemasters' registration card and you find yourself being asked for your opinion on games like the excellent Firehawk.



■ Codemasters' games tester Dave Ward tackles programmers over a misplaced ball in First Division Manager.

What a doss. Just imagine it - rolling into work every day, sitting down at an ST, booting up a game, playing it for eight hours or so and then going home again. How jammy can you get? Well that's the reality of working life for some of the unsung heroes of the leisure software industry - the games testers.

Games testers play an important - some say crucial - role in the development of new software for your ST. They're the ones who're responsible for detecting all the little gameplaying bugs and programming problems which can

turn promising games into disaster areas. And the job is becoming more and more important by the

"Testing is now something you're looking at almost as a profession"

Tony Bourne, US Gold

day, as CD-ROM technology and hi-tech machines like the Falcon push forward the boundaries of what

games can do. Indeed, US Gold's Software Development Manager Tony Bourne argues: "The days when you could get away with a few testers in the backroom and be a bit half-hearted about it are long gone. Testing is now something you're looking at almost as a profession. Testers will start to be taken more seriously and become more important as games get ever more complicated."

To put this assertion to the test, *ST FORMAT* looked at three different software houses - US Gold, Codemasters and Digital Integration - and the ways they organise their games testing. US Gold

has one of the biggest testing operations with 12 staff and an increasing network of external testers dedicated to putting the latest games through their paces. Codemasters employ two full-time games testers and rope in members of Dizzy's Cartoon Club to help them, while at Digital Integration everyone from desktop publishers to admin staff get involved in helping their solitary tester play his way through their forthcoming releases. One thing soon becomes apparent, there's more to games testing than just playing your favourite shoot-'em-up all day.

Bugs, bugs, glorious bugs

For a start there are two different ways of testing games. Alpha Tests are usually carried out by programmers or the games testers during the very early stages of the game, when they usually only have a partially working demo or a single level to look at. This means testers can make changes to the way a game looks or plays and even suggest new elements they'd like to see included. US Gold's Testing Supervisor Martin Smith cites one example: "One of the best ones was on *Flashback...* First off, when you got so close to an enemy you couldn't shoot him - you could

HOW YOU CAN GET IN ON THE ACT

Anyone can be a games tester. It's not some big secret the software industry is trying to hide from you, so what experience and qualifications do you need to become a games tester?

You might think being a supremely talented games player is all it takes to be a tester. Wrong. Sometimes it can be a positive disadvantage - companies like US Gold and Codemasters receive hundreds of job applications from people who just want to sit in front of monitors all day playing the latest platforming sensation.

No. Being a games tester requires a whole assortment of talents - you have to be able to play games to destruction, organise a hectic work schedule and be able to communicate your misgivings about games without upsetting a programmer's sensitive ego. Paul Anson of Codemasters puts it: "it can be quite a daunting prospect telling a programmer who's worked on a game for six

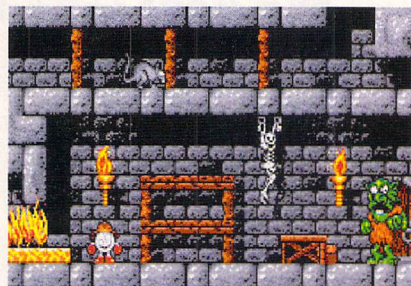
■ US Gold's Software Development Manager Tony Bourne organises one of the biggest games testing operations in the UK.



months that there's something wrong, so you have to be quite self confident." However, Paul believes there's nothing you can do which is going to prepare you for a job as a games tester. It's not as if you can study for a degree in it or spend years working on a games testers kibbutz. "There's nothing comparable to playing video games. I wouldn't say you need ten GCSEs or something - the only thing exams would indicate is the ability to do the job."

So if you don't need any work experience or any qualifications, how can you go about getting a job as a tester? Tony Bourne, Software Development Manager at US Gold offers some timely advice, "Pester software companies and keep pestering software companies. If you want to get into the development side of the software industry one of the best ways of getting into the business is as a tester."

■ If you spent the last eight months testing *Street Fighter 2* or *Legends of Valour* on your ST you'd probably end up looking like this - there's a lot more to playing games all day and every day than you realise.



■ After a long, hard day at work, there's nothing better than a good romp through your favourite ST game. Unless you happen to be a Dizzy games tester, of course.



■ When Steve Wyatt and Dave Ward aren't fixing bugs in Dizzy games, they scour Codemasters offices for the latest gossip.

■ Some people hate slugs, others throw salt on them, but you can play them to death as a games tester.



point the barrel of the gun clean past his head and you'd miss. I asked if we could pistol-whip him and it works fantastically, it's a good way to go through a lot of the enemies. It's safe and it's messy."

When a game is nearing completion, the Beta Test kicks in. This is when the testers actually start to play their way through the game hunting for the programming bugs and anomalies which can foul up the playing experience. For example, Martin Smith discovered a problem with the artificial intelligence in *Legends of Valour* which meant that the game kept losing track of the number of objects in a room. "I went chasing around the town after all the birds which fly around, picked up loads of them and took them back to the hotel room I'd booked. Eventually there were 30 to 40 birds floating around this room. After a certain number of birds, when you picked up an object and dropped it again, the object you'd dropped or thrown would just disappear – due to the bug. Nobody could work out why, but I twigged it – maybe it's related

to the number of birds I had in this room? They were just another item. It could have been anything – rocks, salt, whatever – but when you've got so many objects in one

"CD-ROM technology and hi-tech machines like the Falcon push forward the boundaries"

room it (the game's artificial intelligence) started losing track of all the items." Even simple things like write-enabling the game disk or turning the in-game music off during a test can have an effect on the way a program works, so companies like US Gold and Codemasters

■ (Right) Tension runs high in US Gold's offices as games testing the latest *Street Fighter 2* conversion threatens to drag on and on.



■ (Above) Blanka takes Ken out for a bite to eat in the *FORMAT* Gold rated beat-'em-up *Street Fighter 2*.

operate a checklist system to ensure that every game is thoroughly checked before it goes into production.

Testing, testing, one, two

One surprising aspect of games testers' jobs is that they don't specialise in particular formats – no-one at US Gold, Codemasters or Digital Integration concentrates specifically on the ST – but work



■ Michael Jackson meets some of US Gold's software developers in Birmingham.



■ Ravi Chopra is a games tester for US Gold. His major claim to fame is no less than six appearances on Sky One's *Games World* show.



■ *Indiana Jones* and *Legends of Valour* are just two of the games US Gold's testers have put through their paces.



■ Testing Supervisor Martin Smith is responsible for putting the boot in when tester Peter Smith's enthusiasm for *Street Fighter 2* starts to lag.

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■ Russell Allcock answers the phone, checks out the latest games and eradicates bugs for Digital Integration. Who says games testers have it easy?

across all formats on all types of games. For example, Dave Ward and Steve Wyatt have tested Codemasters' games on the ST, Amstrad, Amiga, PC and Sega Mega Drive, so they never get stuck in a rut working on one type of machine or playing one particular game genre – there's no danger you're going to end up playing footy games for the rest of your life if you really hate them.

That doesn't stop things getting boring though. Pete Smith is one of US Gold's top games testers and has been playing the PC version of *Street Fighter 2* since Christmas. That's seven hours a day, five days a week for over six months, not including the odd weekend and evening stint. You'd have to be a pretty enthusiastic beat-'em-up addict to want to play even *Street Fighter 2* for that length of time. Meanwhile Digital Integration's solitary tester Russell Allcock has been chalking up hundreds of hours of flying time on the Tornado flight sim which is due for release in November.

Staring at a monitor wagging a joystick all day is enough to drive you to the brink of insanity. Not surprisingly, games testers get heartily sick of the games they have to play, some of them even start avoiding games arcades as if their lives depended on it and worst of all, when they can bring themselves to play a game for fun, they start noticing all the things that are wrong with it. Ravi Chopra – another US Gold games tester and Games World *Street Fighter 2* Champion – explained: "Before I actually started the job, playing games at home, y'know, I never used to take much notice of bugs in games, but since I've been here you sit and look at a game and see a bug you think 'there's a bug in this game,' and phone up the company and give them a bit of an earful."

To help to relieve the monotonous games testers occasionally have to put up with, Codemasters and Digital Integration give their staff other jobs to do – in Dave and



■ Digital Integration are working on the ST and Falcon versions of the Tornado flight sim. In the meantime, check out their brilliant Goblins adventure.

Steve's case they get involved in looking after all the Codemasters' network of business computers, acting as technical support staff when things go wrong. Digital Integration games tester, Russell Allcock, also has members of the public to contend with. He's one of the chaps who picks up the phone or answers your letters when you have a problem with games like

"When something good's gone into the game you get the satisfaction of saying, 'I did that'"

Ravi Chopra US Gold

Goblins 2 or the *Falcon* flight sims. He's also responsible for evaluating games Digital Integration would like to release on their Action Sixteen budget label. "We've looked at a load of games that have come out over the last year, ones that haven't even necessarily started to drop off sales." Unusually, Digital Integration is also one of the companies which imports ST games from Europe, so although the game's finished from a testing point of view there's still all the English translation and compatibility to check.

But is it a proper job?

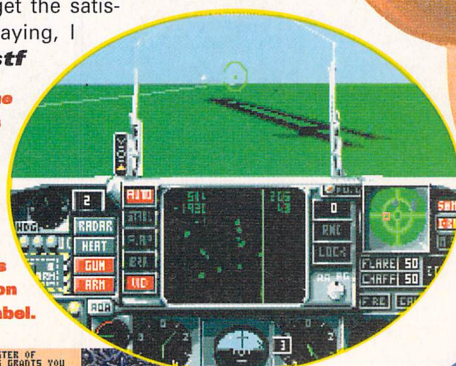
So, do the games testers actually enjoy their jobs? And is it as big a doss as it sounds? Russell Allcock cer-

tainly agrees his job's a lot of fun, though confesses he sometimes

gets odd reactions when he tells people what he does for a living. "They start laughing," he says sheepishly. Perhaps it's his age – he's 23 – and games testing is probably more suited to school-leavers.

However, Codies Dave Ward and Steve Wyatt have no qualms about what they do. "You don't get a chance to skive off too often," argues Steve, while Dave justifies his existence by claiming: "It's quite hard work. It's a real job in the sense that we're not just games testers, we're responsible for when one of the business computers – one of the PCs – goes down, we've got to fix it, we've got to sort out the problem." But you can't beat the fact that you can get to play games all day and get paid for it. The final word goes to Ravi Chopra: "Working on games is absolutely brilliant, because at the end of the day when something good's gone into the game you get the satisfaction of saying, I did that." **stf**

■ Flight of the Intruder is just one of the budget games available on Digital Integration's Action Sixteen label.



■ It's Russell Allcock's job to play his way through games like *Kult* or the adult adventuring in Coktel Vision's *Fascination*.

WIN! WIN! WIN! WIN!



■ These aren't mad axe murderers from Yoof TV hell, but Dave Ward and Steve Wyatt, Codemasters' jovial games testers and your hosts for a smashing day out in Warwickshire.

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Here's your chance to try out some of the latest games with the Codemasters' games testers in **ST FORMAT'S** brilliant competition

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whole day with them at their splendid farmhouse in the delightful surroundings of the Warwickshire countryside. You get to meet all the programmers, spend a few

hours testing games with Dave Ward and Steve Wyatt, have a spot of lunch and generally have a ball and see what life in a software house is really like.

To win this fabulous day out, all you have to do is answer the following questions and pop them – the answers not the questions – in the post to "I'm so Dizzy," **ST FORMAT**, 30 Monmouth Street, Bath BA1 2BW. Don't forget to include your full address and telephone number so we can contact you if you win.

Competition Rules

1. All competition entries must be received no later than Friday 15 October 1993.
2. Friends, relations and employees of either Future Publishing or Codemasters are not allowed to enter the competition.
3. Duplicate entries will be shredded and made into cheesy omelettes for everyone at Streatham Bus Garage.
4. The editor's decision is final and no correspondence shall be entered into. Ciao.

1 Name three of Codemasters' games.

2 How many games testers do Codemasters employ?

3 Who are they?

4 Who is Paul Anson?

5 Where are Codemasters based?

KIPPERS AND CUSTARD

Back in **ST FORMAT** 49 we gave you the chance to win a stunning field radio, like they used back in the '40s and a selection of war games from Empire – the rather wondrous Team Yankee, the most exciting Pacific Islands and the most sandy War in the Gulf. We gave you the questions and you gave us the answers in your droves. These were they

1 What was the name of the Iraqi launched missiles that were launched in Israel? *Scud missiles*

2 In what year is War in the Gulf set? *1995*

3 What terrain do tanks move on fastest? *Purpose built roads*

4 How big is the playing area of the game? *400 miles squared*

5 Which issue of **ST FORMAT** was Pacific Islands originally reviewed in? *STF 35*

6 What tactic can you employ to make your tanks much harder to detect? *Engine smoke*

7 Who was the Allied Supreme Commander in the real war in the Gulf? *Norman Schwarzkopf (or virtually any nickname you could think of.)*

8 What is the name of the head of the Kuwaiti royal family? *Emir Sheikh Jabir Al-Ahmed Al Jabir Al-Sabah. Actually, we'd have accepted Sultan of Kuwait.*

9 What piece of technology enables you to see through the smoke of battle? *Thermal Imaging camera.*

10 What are the five weapon types that you can use in War in the Gulf? *Heat, sabot, TOW, smoke and machine gun.*

The field radio goes to Malcolm Cutting of Ealing in London, and the games all go to A Day of Solihull in the West Midlands, Wali Chishti (really) of Cardiff, David Ranvig of Oslo in Norway, Michael Fell of Hull (despite the rather unright-on postcard, you know what we mean) and Alan Millard of West Ealing in London. Congratulations to you all, your games and field radio will be with you very shortly.

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SAVING: £149
SILICA PRICE: £259

£259
+VAT=£304.33 - PRI 2571

9 PIN 240 CPS 80 COLUMN



- Citizen Swift 90 - 9 pin - 80 column
- 240cps SD (10cps) 192cps Draft, 48cps NLQ
- 8K Printer Buffer
- 6 Fonts Built-in
- Parallel Interface
- Graphics Resolution: 240 x 216dpi
- Epson and IBM Emulation
- Auto Set Facility
- Ultra Quiet Mode - 45dB(A)
- Advanced Paper Handling
- Colour Printing Standard - Swift 90C, Colour Printing Optional - Swift 90
- FREE Silica Printer Starter Kit

SWIFT 90 MONO

RRP £199
STARTER KIT £49
TOTAL VALUE: £248
SAVING: £99
SILICA PRICE: £149

£149
+VAT=£175.08 - PRI 2290

SWIFT 90C COLOUR

RRP £219
STARTER KIT £49
TOTAL VALUE: £268
SAVING: £99
SILICA PRICE: £169

£169
+VAT=£198.58 - PRI 2297

INKJET 360 CPS 80 COLUMN



- Citizen Project inkjet - 80 column
- 360cps Draft, 120cps NLQ
- 50 Nozzle Head - Whisper Quiet 47dB(A)
- 8K Printer Buffer
- RAM Card Options
- 3 Fonts Built-in
- Optional HP Compatible Font Cards
- Parallel and Serial Interface
- Graphics Resolution: 300 x 300dpi
- HP Deskjet Plus Emulation
- 2 Year Warranty

RRP £496

TOTAL VALUE: £496

SAVING: £217

SILICA PRICE: £279

£279
+VAT=£327.83 - PRI 2090

- Citizen Swift 24x - 24 pin - 136 col
- 192cps Draft, 64cps NLQ
- 8K Printer Buffer + 4 Fonts
- Parallel Interface
- Graphics Resolution: 360 x 360dpi
- Epson, IBM and NEC P6 Emulation
- Colour Option Available
- FREE Silica Printer Starter Kit

RRP £489

SILICA STARTER KIT £49

TOTAL VALUE: £538

SAVING: £229

SILICA PRICE: £309

£309
+VAT=£363.08 - PRI 2574



FREE! STARTER KIT WORTH £49.00 SEE ABOVE

- Citizen PN48 Notebook Printer
- Non-impact Printing on Plain Paper
- 53cps LQ - 4K Buffer + 2 Fonts
- Rear and Bottom Paper Loading
- Parallel Interface
- Graphics Res: 360 x 360dpi
- Epson, IBM, NEC P6 & Citizen Emulation
- Power: Mains, Battery or Car Adaptor

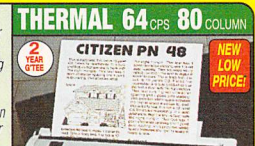
RRP £325

TOTAL VALUE: £325

SAVING: £126

SILICA PRICE: £199

£199
+VAT=£233.83 - PRI 2100



FREE DELIVERY

230693-1630

SILICA SYSTEMS OFFER YOU

- **FREE OVERNIGHT DELIVERY:** On all hardware orders shipped in the UK mainland.
- **TECHNICAL SUPPORT HELPLINE:** Team of technical experts at your service.
- **PRICE MATCH:** We normally match competitors on a "Same product - Same price" basis.
- **ESTABLISHED 14 YEARS:** Proven track record in professional computer sales.
- **£12 MILLION TURNOVER (with 60 staff):** Solid, reliable and profitable.
- **BUSINESS + EDUCATION + GOVERNMENT:** Volume discounts available 081-308 0888.
- **SHOWROOMS:** Demonstration and training facilities at all our stores.
- **THE FULL STOCK RANGE:** All of your requirements from one supplier.
- **FREE CATALOGUES:** Will be mailed to you with offers + software and peripheral details.
- **PAYMENT:** Major credit cards, cash, cheque or monthly terms (APR 29.8% - written quotes on request).

Before you decide when to buy your new printer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals and accessories, or help and advice. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. We have been established for almost 14 years and with our unrivalled experience and expertise, we can now claim to meet our customers' requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest FREE literature and begin to experience the "Silica Systems Service".

MAIL ORDER HOTLINE
081-309 1111
SILICA IS A DIVISION OF PRODIS PLC

SILICA SYSTEMS

MAIL ORDER: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX
Order Lines Open: Mon-Sat 9.00am-6.00pm No Late Night Opening
LONDON SHOP: 52 Tottenham Court Road, London, W1P 0BA
Opening Hours: Mon-Sat 9.30am-7.00pm No Late Night Opening
LONDON SHOP: Selfridges (Basement Arena), Oxford Street, London, W1A 1AB
Opening Hours: Mon-Sat 9.30am-7.00pm Late Night: Thursday - 8pm
SIDCUP SHOP: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX
Opening Hours: Mon-Sat 9.00am-5.30pm Late Night: Friday - 7pm
ESSEX SHOP: Keddies (2nd Floor), High Street, Southend-on-Sea, Essex, SS1 1LA
Opening Hours: Mon-Fri 9.30am-5.30pm (Sat 9.00am-6.00pm) Late Night: Thursday - 7pm

Tel: 081-309 1111
Fax No: 081-308 0608
Tel: 071-580 4000
Fax No: 071-323 4737
Tel: 071-629 1234
Extension: 3914
Tel: 081-302 8811
Fax No: 081-309 0017
Tel: 0702 468039
Fax No: 0702 468039

To: Silica Systems, STFOR-1093-55, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX
PLEASE SEND A BROCHURE ON THE CITIZEN RANGE

Mr/Ms/Ms: Initials: Surname: Date:

Company Name (if applicable):

Address:

Postcode:

Tel (Home): Tel (Work):

Which computer(s), if any, do you own?

THE VERSATILITY

Desktop publishing has been made easier with packages to suit both your machine and your pocket. Frank Charlton shows you how to create professional pages on your ST

Publishing. The very word used to conjure up images of big corporate executives sitting in their big offices smoking fat cigars, running their vast newspaper empires. People aspiring to be publishers would have armed themselves with a typewriter, glue and scissors, and produced newsletters and magazines at home. Constructing – or literally “pasting up” – pages was the way publishing used to happen. It was a bit of a hit and miss affair if you didn’t have much practice – typing your text into columns and sticking bits of paper together was very fiddly to change if you didn’t like the end result. Hundreds of good ideas didn’t get to print because of the hassle involved in producing magazines.

With the introduction of easy to use desktop computers like the ST and Apple Mac, the business publishing world began to change. These days newspaper and magazine houses take the building blocks of a page and bring them all together on-screen, chopping and changing the design – you don’t find yourself wrapped up in sheets of paper.

When the ST appeared, at a fraction of the Mac’s price, the rumbling in the distance began – the desktop publishing revolution had started. Everyone with the basic hardware and some decent desktop publishing software could, in theory at least, create their own special interest magazines, newsletters and business cards.

Desktop publishing is a simple idea. Anyone with an ST, some

software and a little enthusiasm can create professional leaflets or magazines from home without a degree in page design – it truly is the freedom of the presses.

You may already use a word processor or one of the upmarket document processors (see our review of *Calligrapher Gold* on page 56 for an example of one of the better document processors) but a full DTP system can improve your results beyond your imagination. The idea behind a DTP program is that it works with your other programs, integrating the text from your word processor and the graphics from your art package or scanner together. It is, after

all, a tool, but a powerful one that can make you money, aid your enjoyment of hobbies, or simply give you the freedom to create. It’s very satisfying to look at a well-executed page, and know that you did it without moving from your chair, and, just as importantly, without breaking the bank.

Without DTP, magazines like *ST FORMAT* would be much more fiddly and inefficient to produce. DTP has made an impact on the commercial publishing world, and it can affect yours, too. From the most humble ST setup to the biggest, we’re going to show you how you can dive into the world of desktop publishing...

Doddle or nightmare?

Most DTP packages are supplied with a limited range of fonts, and unfortunately they don’t all support the same standard. Depending on

“DTP programs work with your other programs, integrating text from your WP and graphics from your art package”



which software you use, getting hold of new typefaces can be a doddle or a nightmare.

Programs which use Atari’s bitmapped GDOS font system such as *Easy Text Pro* or *Timeworks 2* are well catered for. Quality faces are available commercially from sources such as the ST Club at different sizes to suit your printer, and Public Domain offerings abound,

although some are of pretty dubious quality.

The snag with GDOS fonts is that a separate font file is needed for all three screen resolutions as well as one for the printer, so check carefully, since some PD disks may only be screen fonts for use with paint programs which support them. Another solution is to produce your own, and editors such as

TEN TOP TIPS FOR TOPPING DTP. OR SOMETHING

- 1** **DON'T BE INTIMIDATED.** Don't feel you need lots of expensive hardware and the latest do-it-all software to produce good pages. Thoughtful design is a big consideration, and good results can be achieved with the lowliest ST setup.
- 2** **THINK SIMPLE.** Just because you have a huge collection of fonts doesn't mean you have to use them all on every page. Be selective and stick to a few complementary or contrasting fonts.
- 3** **LOOK AT OTHER WORK.** Professional magazines like this one can provide inspiration too. Keep hold of interesting flyers or booklets for future ideas, but try not to copy blindly.
- 4** **START SMALL.** If you're new to a program, start with an easy project like a page of disk labels. You don't have to feel you should be producing magazine layouts within a couple of hours of installing the software.
- 5** **PLAN YOUR DESIGN.** Steer your readers through the page the way you want them to go – text weight and styling help here. No matter how interesting your writing, if the page is confusing the reader may not give it a second look.
- 6** **USE GRAPHICS WISELY.** A strategically placed image can also improve the flow of a page, but a great big picture smack in the centre of the page is what your readers see first.
- 7** **USE "WHITE SPACE."** This is the term given to the parts of the page left blank. Many home produced newsletters try to cram as much as possible onto a page, but spacious design can be far easier on the eye, even if not as informative.
- 8** **THINK IN CONTEXT.** An adventure sports club magazine should be laid out excitingly. Is your document meant to grab attention straight away, or capture your reader and guide him steadily?
- 9** **BUILD AN IMAGE LIBRARY.** If you have a scanner, keep your eye open for interesting images from the "real world," but be very careful about copyright laws! Alternatively, swap bits of clip-art with friends.
- 10** **EXPERIMENT!** The rules aren't carved in rock – so don't be afraid to play with multiple layouts or even defy convention. If a particular idea looks pleasing, you like it, and it conveys the message you want it to, use it.

for images which are purchased on disk ready for you to incorporate into your documents. Some quality images are available from Gasteiner and Kuma but commercial prices are often pretty high.

Art from the Public Domain can vary from the superb to downright rosey, but there's loads of it available. Try the ST Club or Page 6 both of whom have an impressive selection on offer. There is even a library dedicated to clip images – give ImageArt a call.

A hand scanner enables you to digitise images from paper into your ST's memory so you can save them to disk to load into your DTP document. Scanning is easy, and is very handy if you need to input company logos or even your own signature.

Most scanners use the same scanning head mechanism, and the choice is often down to how well the software performs. One scanner worth looking at is the Alpha Scan Plus (£119.99 from First Computer Centre) which comes bundled with the brilliant *Touch-Up* software. Have a look at the *Indispensable Guide* which comes bundled with this month's *ST FORMAT* for the latest on availability and recommended buys. A point worth noting when you're doing a bit of scanning is that you don't use copyrighted images – leave that Mickey Mouse pic alone unless you want the corporate might of Walt Disney knocking on your door...

A splash of colour

A bit of colour in your documents can make all the difference. Think about it in terms of real life – it has great significance, and you can apply this to your DTP work as well. A red logo for "Scorcher's Heating Systems" wouldn't have the same effect in green, would it? Nor would "Frosty Ice Cream" look particularly fetching in purple. If you have a headline that you want to leap up off the page and grab reader's attention, it would be effective in a contrasting shade to the main text.

Even on a monochrome screen you can use colour. At *ST FORMAT* we use a process called colour separation. The photo opposite is printed using four hues. Each pic is made up of sections of these colours, and when they're all combined you see the full colour photo. We use CMYK separation, using Cyan (blue), Magenta (Red), Yellow and Black. The page is printed four times, once for each shade, and the resulting mix brings you the selection of colours you can see here.

Until recently, DTP on the ST was mono, but now software like *Calamus SL* can help you produce separations, but you won't see the colours until they're printed.

■ For details of Public Domain libraries, see page 96 and for any commercial companies see Essential Contacts on page 105.

"Leave that Mickey Mouse pic alone unless you want the might of Walt Disney at your door"

the ST Club's *Fontkit Plus 3* can help out here. Vector fonts for high-end packages like *Calamus* and *Pagestream 2* are easy to obtain commercially from companies like Advanced Graphics Ltd or from PD libraries.

Worth 1,000 words?

Adding some graphics to your page not only illustrates the docu-

ment, but can make the document easier and more enticing to read. If you can draw, you can easily find a paint package which supports your DTP software from the superb PD package *PAD* from the Floppypshop to the commercial masterpiece *Arabesque Professional* from Compo. If you lack artistic flair all is not lost – you could use clip-art or a hand scanner. Clip-art is a term



THE BUDGET CHOICE

At the budget end of the desktop publishing program ladder is **zzSoft's excellent Easy Text Professional**.

EZT Pro is an entry-level DTP system priced at not much more than the price of a commercial

game, and yet it offers features which were available in programs costing hundreds of pounds only a few years ago.

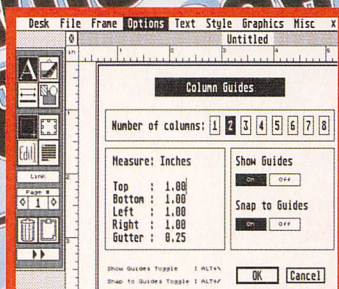
With this program you've got the ability to produce quality DTP work with multiple pages, both

bitmap and vector graphics, multiple columns, text runaround and a host of other facilities, enabling you to finish up with decent quality output even from one of the cheaper 9-pin dot matrix printers. EZT's manual is not only a self-help

guide to the program, but goes a good way towards grounding you in the basics of the desktop publishing process, too.

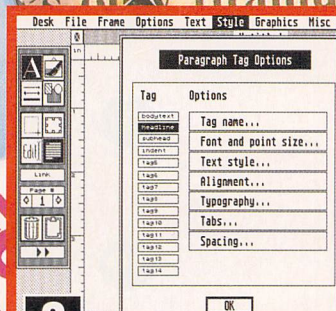
Easy Text Professional needs 1MByte to run, but happily works from a floppy-only system on a

THE FIRST STEP IS TO GET YOURSELF A REASONABLY PRICED BUT COMPETENT DESKTOP



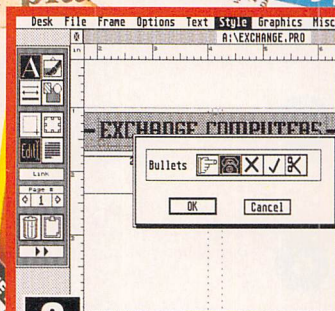
1

To produce a single page ad rather than a newsletter, a simple two-column layout is probably the best grid to choose. Here we're setting the actual column sizes, with the snap function turned on. This makes the frames cling to the column edges - basically just an easy way of making sure the column edges are correctly aligned.



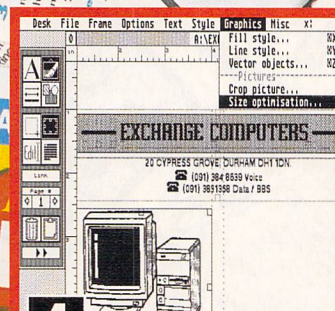
2

Easy Text Professional uses a system of paragraph tags so you can give individual portions of text their own style, such as headlines and the body text. We've highlighted the company logo at the top and styled in the Athens font, at 28 point size. You can adjust any styling you need from this single dialog box.



3

With the logo placed over a shaded box for a bit of emphasis, we're just about to add the company's address line below. The dialog box enables you to add a "bullet" or symbol to the text - here we're adding a little telephone to make the company's number stand out more. We use 'em all the time at STF so they must be good.



4

After opening a graphics frame, we've added a piece of IMG clip art. The pic was slightly out of proportion, but selecting the option from the menu enables us to optimize the size for screen or printer, bringing back its original unstretched shape. Optimizing for printer tends to give you the most even results.

THE PROFESSIONAL CHOICE

Since the introduction of the original version, **Calamus** has arguably been the professional face of DTP on the ST.

The newest version, **Calamus SL**, can even handle colour separa-

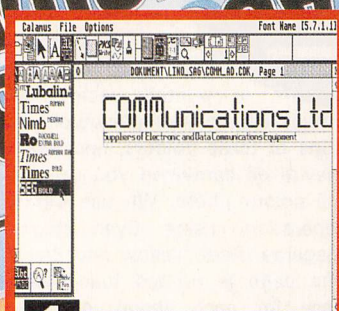
tions using the CMYK system. Even though you aren't able to see on-screen colour on an ST, it's still possible to create stunning full colour pages for output at a print bureau, although you have to

be pretty good at visualising combinations of colours in your head to prevent disastrous mixtures.

Nature uses colour for many purposes - red conjures images of heat, or even danger, and we asso-

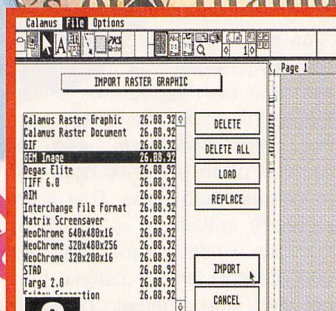
ciate other shades with different meanings. Good use of colour is made in the advertising world - leaf through the ads in *STF* and see for yourself. Ads are there to focus your attention on a product, and

IF YOU'RE WORKING WITH DTP PROFESSIONALLY OR JUST HAVE LOADS OF CASH TO



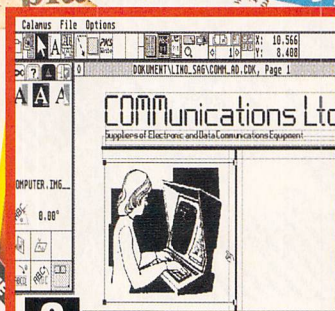
1

We're creating a single page press release for this company to send out to magazines for some publicity. Large publishers might receive hundreds of different press releases every day, so using colour helps to get their attention. Here everything is still black and white - we add colour after composing the basic page.



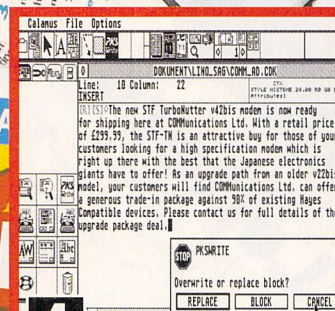
2

Calamus SL imports an impressive range of picture formats using modules loaded from disk. You can save memory as you go by sticking to one or two file types, but here we've been greedy and used almost all of them. We can even load compressed GIFs and Targa 24-bit pictures if we need to - very impressive.



3

Here we've gone for a simple but striking mono image - you can always tint the picture with colour later in the editing process. With Calamus SL you can change shades indefinitely as you go along. Try and make sure the image is relevant and not over-used. For professional use, the PD is probably not the best place to go.



4

PKSWRITE is the text editor that comes with Calamus SL and we're creating a portion of the body text here. It's fast and easy to use for quick jobs without quitting the program, but it doesn't give you the freedom of a fully featured word processor. When we exit, the text is dropped straight into the selected frame.

medium resolution TV screen. Since EZT uses the GDOS font system, adding extras is cheap and easy. Many Public Domain libraries stock a plentiful supply of fonts at £2 – £3 per disk, (take a look at the directory on page 96) and the manual fully explains how you go about making the program recognise and use the fonts by simply

“With EZT Pro, a WP and a drawing program, you can be running with the minimum of expense”

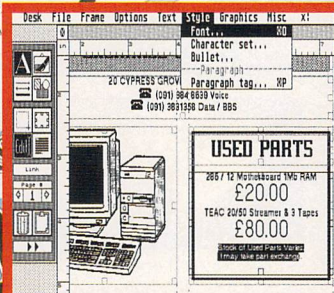
altering the ASSIGN.SYS file with your favourite text editor.

Armed with *Easy Text Professional*, a simple word processor or text editor – such as *Scribe* from Ad.Lib PD, some clip-art and a drawing program (like *Prism Paint* from STF Cover Disk 48 – turn to page 50 to order your copy if you missed it) you can be up and run-

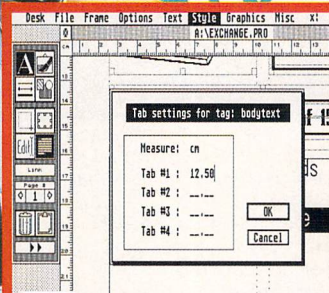
ning with the minimum of expense. Take a look at the example we’ve shown below, with eight basic steps in the creation of a single page advertisement using nothing more than *Easy Text* coupled with a disk of clip-art and some text we edited in a simple text editor...

■ **Easy Text Professional** ■ £39.95
■ **zzSoft** ■ ☎ 0254 386192

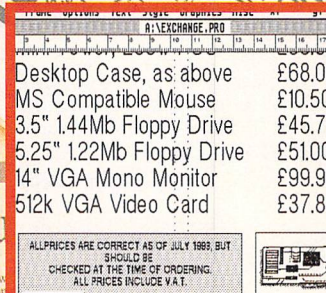
PUBLISHING PROGRAM. THE CHOICE IS YOURS – AND OURS IS EASY TEXT PROFESSIONAL



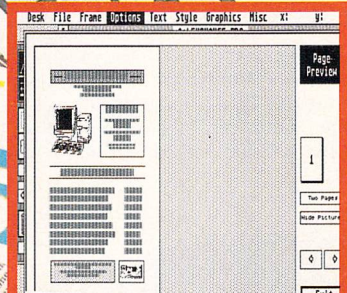
5 We’ve opened a blank outlined box from the toolbox, and imported a small text file from disk. By highlighting with the mouse, you can change the font size and style for different lines to help make the excellent value prices jump out from the page. Even single letters can be different sizes for emphasis.



6 Now we’ve opened a text frame and imported the main price list which we created in our word processor. The tab sizes were all wrong, though – a very common problem. We tagged the text as a paragraph, and after adjusting the tabs in the dialog box, the prices are neatly set out to the right of the products.



7 To finish off, we’ve added a box at the bottom of the page with the VAT information in. We also dropped a new graphic in which is actually a PC expansion card, relating to the nature of the business – it’s always good to have relevant illustration. The next step was to hide the frame outlines to see the page as it should look on paper.



8 Clicking on “Page Preview” gives you a full A4 page view. Text is replaced by grey bars to speed the viewing up, but it gives you a good final indication that everything is where it should be before you actually print the page out. Just the effect we were looking for, and a job well done with *Easy Text Pro*.

well used colour can grab your attention as you flick through the pages, stopping you long enough to read what it says. Even an ad with a single coloured headline on a monochrome layout can do the trick – simplicity is often more effective than lots of bright clutter – too many elements fight each

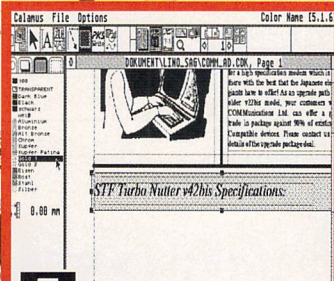
other. With the technology for colour separation output being so expensive, printing bureaux or repro houses are the answer. They print your pages giving you output you couldn’t otherwise afford. A bureau may be the answer for large or important jobs, but photocopy shops with colour laser

“Simplicity is more effective than bright clutter – too many elements fight”

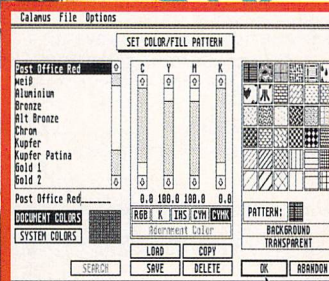
copies are also handy for simple headline highlighting, for example. Colour separation needn’t be intimidating, either. The software is already here – you just need a little practice to be producing lovely polychromatic pages. **stf**

■ **Calamus SL** ■ £575 ■ JCA (Europe) Ltd ■ ☎ 0734 452416

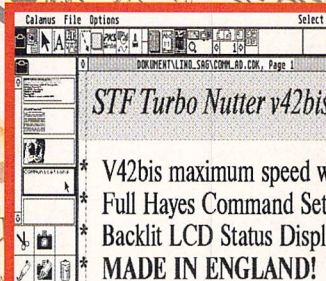
SPARE – YOU MAY WANT TO INVEST IN A COLOUR DTP PACKAGE LIKE CALAMUS SL



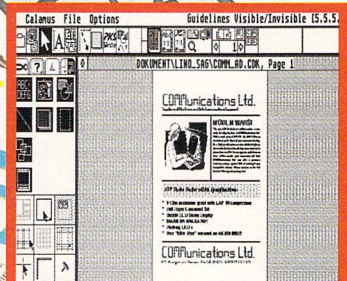
5 Now we’re starting to add some colour to this shaded box. SL comes supplied with a selection of pre-defined colour sets which can be loaded from disk. This one is the Metallic set, and we’ve decided to tint the box with gold, so as to emphasise the fact that this is advertising the company’s top of the range product.



6 By clicking on the selected shade you can edit the CMYK settings for it. For simple, bold colours like a striking red, you can use the RGB (red, green and blue) mixing process as you would in a colour art package. Remember you can’t see the effect on-screen – a colour specification book comes in handy here.



7 A final close-up of the frame containing the product’s specifications. Since the manufacturer seems proud of the product’s British heritage, we could even tint the “Made in England!” text in shades of red, white and blue on a coloured box to make it stand out. On the other hand, you might decide this looks rather tacky.



8 The full page at its finished stage. The company logo has been re-created at the bottom to give the page a uniform look, and remind people of the name and the electronic-display typeface tinted in a fetching green. All ready to go off to the bureau for output as camera-ready artwork, and the job is done.

Tel: 081 365 1151
Fax: 081 885 1953

GASTEINER

Unit 2, Millmead Business Centre, Millmead Road, Tottenham Hale, London N17 9QU



ICD

POWER

ATARI

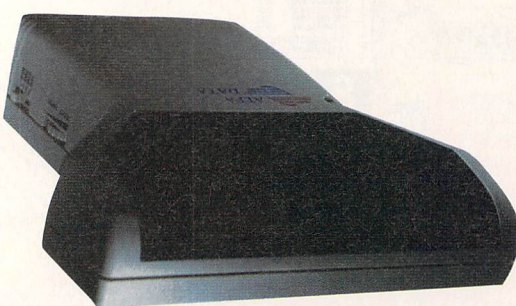
SCANNER

Newcomers who like to scan detailed graphics or complicated images experience with the ALFADATA a favourable alternative to typing or re-scaling and investing a lot of time. Advanced users who insist on the efficient character recognition and comfortable graphic software. Choose between ALFA-DATA plus or ALFA-DATA plus OCR.

GOLD AWARD - ST FORMAT

ALFADATA PLUS
£119.00
(256 Greyscale)

ALFADATA OCR
Limited Special Offer
£145.00



System requirements to run OCR: minimum 2Mb RAM and hard drive

FALCON 030



A 16MHz 32 bit computer for fast processing, it comes with a 1.44Mb floppy disk drive, with built-in speaker.
 Falcon 030 4Mb£749.00
 Falcon 030 4Mb + 65Mb Hard Drive.....£899.00
 Falcon 030 4Mb + 85Mb Hard Drive.....£949.00
 Falcon 030 4Mb + 120Mb Hard Drive.....£1099.00
 Falcon 030 4Mb + 210Mb Hard Drive.....£1299.00

Falcon monitors

Hi-Res mono monitor for Falcon 030£99.00
 SVGA colour for Falcon 030 .28 dot pitch£239.00
 includes adaptor cables from Falcon to the monitors.

FALCON 030 EXTERNAL HARD DRIVE



An economical enclosure designed to mount a single, half height, 3.5" device. Features a 40 watt power supply with a universal AC input for use throughout the world and a low noise 15C.F.M. fan to provide device cooling. Also includes the Falcon SCSI II cable.

SCSI II Casing£129.00
 40Mb + SCSI II Casing£219.00
 52Mb + SCSI II Casing£259.00
 127Mb + SCSI II Casing£339.00
 170Mb + SCSI II Casing£389.00
 240Mb + SCSI II Casing£449.00
 540Mb + SCSI II Casing£699.00
 1.2 Gigabyte + SCSI II Casing ..£999.00
 Floptical£389.00

SOFTWARE

WORD PROCESSORS

Wordwriter.....£45.00
 Word Plus V3.2£33.95
 Grapher Pro£73.95
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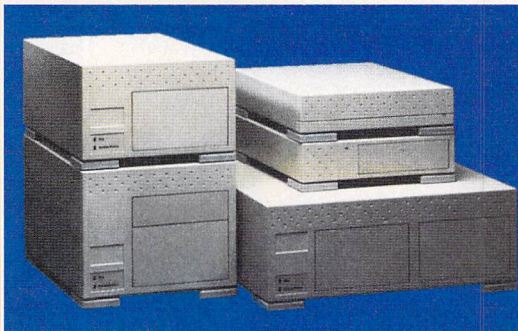
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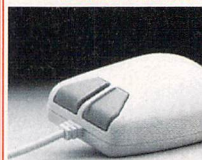


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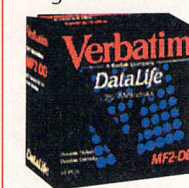
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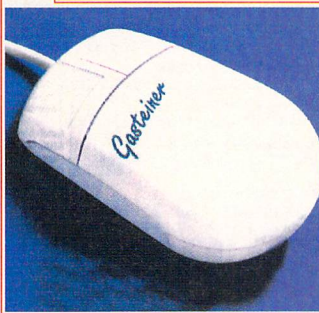
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DO YOU DREAM IN COLOUR?



Why continue to look at your pictures in black and white when you could see them in glorious colour? Clive Parker finds out how it's possible, even with a mono printer

It's so much more exciting to be able to print all those fabulously intricate illustrations and true colour pictures in colour; don't you find black and white printouts very dull after you've seen the original picture in all its technicolour glory on-screen?

Just think, you can print out your favourite pics and decorate your bedroom with them or even stick them on bits of card for your own personalised greeting cards, Blue Peter style. You don't even need to spend a fortune – you can either cheat or go for a low cost 9-pin. Affordable colour printers come in three flavours; 9-pin, 24-pin and inkjet, with prices starting from about £150 for a decent 9-pin if you shop around and the inkjets set you back £500 or more. Colour laser printers are priced at well over £1,000.

You can now produce colour output from mono inkjet printers using coloured ink cartridges and special printing programs.

Cheating

You can print out in colour without having a colour printer. The very best colour printing software around for the ST and Falcon is *Imagecopy Colour 2*, a snip at £19.95 from the ST Club. It works on all STs in every resolution and enables you to print out 256 colour and true colour pictures, even if you only have a mono monitor.

Just connect up your printer and ensure that it's in Epson mode – most printers are set up this way automatically. Once you're up and running you're ready to roll. Load *Imagecopy Colour 2* and select Printer Type from the options menu. All you need to do now is select the correct printer driver. If you have any 9-pin printer then select Epson 9-pin and CMYK colour and you are ready to print. Save the settings so that *Imagecopy* is always correctly configured when you use it. You have almost total control over the final printout, with options to change the

So size is important...

Choosing a printer can be confusing - we simplify it all for you with our checklist of what to look out for

APPLICATION: Buy wisely. Take a good look at the features of a printer and make sure that you really need them for the uses you have in mind for it.

PRICE: Many printers have high recommended retail prices, so check prices with several suppliers before taking the plunge and spending all your hard earned cash. The

Panasonic KX-P2180 has an RRP of £264.38, yet it has a "street price" of around £120.

SIZE: Check your prospective printer isn't going to clog up your entire work area.

SPEED: Graphics reproduction is always slow on any kind of printer, even a laser, as there's so much information to be processed. Even so, the faster your printer prints, the better.

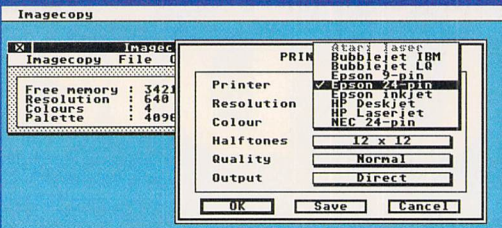
SOFTWARE COMPATIBILITY: A new printer must have some kind of Epson emulation

otherwise it won't work with your ST. This is particularly important if you buy a second-hand printer.

SOUND: Even if a printer is tucked upstairs out of the way the noise of it tends to be carried through the floorboards and manage to annoy everyone in the house. Getting a quiet machine is essential if you live anywhere near anyone else. Most new printers have a quiet mode – some are more effective than others and all have the unfortunate effect of slowing down the output speed.

print resolution, the aspect ratio, the size of the margin and where the image prints on the paper. *Imagecopy* can cope with all kinds of picture files, including GIF, XIMG, Targa, TIFF, JPEG and IFF, so you can print pictures generated from most computer platforms.

Alternatively you could try *Flexidump Plus* (£31.99 from First Computer Centre ☎ 0532 319444.)



You can also produce colour output from a mono inkjet printer using clever software cheats *BJChrome* and *HPChrome*, £5 each

Options to cover virtually all eventualities here. You can adjust the output resolution, colour, print quality and output the picture to disk as a file.

from Rufus Developments, 22 Rowlands Hill, Wimbourne, Dorset BH21 2QQ. The programs are designed for use with Canon Bubblejet printers and HP Deskjet printers and they enable you to print out *Degas* PI1, *Degas* PC1, GIF and some TIFF pictures.

The software splits the picture to be printed into colour separations, either CMY (cyan,

9-PIN PRINTERS



Star LC-200
PRICE: £304.33
FROM: STAR MICRONICS
CONTACT: ☎ 0494 471111



Nothing special here - pale output and a rather too chunky machine for our tastes.

The Star LC-200 is quite large for a 9-pin printer and takes up a sizeable area on your desk. It's easy to use, with all the settings that would normally be set from internal dip switches simply adjusted from the control panel at the front.

There's no reason for you to adjust the initial settings of the printer, it is already set up in Epson emulation mode ready for you to plug in and go. You can easily feed paper into the correct position

using the single sheet guide, a sheet feeder is also available as an extra. The printer is well engineered with good paper guidance. Graphics output, while slow, is passable without too much banding in the darker areas. Colour definition is average, however, with everything looking a bit pale in our test picture. Rather a noisy printer, it has a quiet mode but this does slow down printing.

STF RATING: 72%

Star ZA-200
PRICE: £492.33
FROM: STAR MICRONICS
CONTACT: ☎ 0494 471111

This printer looks too big to be a 9-pin; you feel you are looking at a big 24-pin beast when you first lay eyes on it.

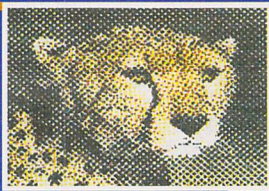
This has to be the Rolls Royce of 9-pin colour printers, considering the specs of this machine. It's designed to be a professional business machine and it certainly

looks it, with a no-nonsense front panel and uncomplicated controls. After you've installed the ribbon you can get straight down to printing your pictures; output is swift and reasonably silent. The picture quality is excellent with the best contrast and the brightest colours of all the 9-pins, but there is some unsightly banding in black areas of the picture.

STF RATING: 80%



A big beast of a printer, this, with excellent output to match. A bit on the pricey side, but shop around and you could get yourself a bargain.



This is rather good and at a reasonable price as well. Consider this option.

Panasonic KX-P2180
PRICE: £264.38
FROM: PANASONIC UK LTD
CONTACT: ☎ 0344 853551

Panasonic printers are sturdy and reliable, if a little boxy, and this one is no exception. The Panasonic range also has all controls on a handy electronic front panel, making adjusting the settings and fonts simple.

The most pleasing aspect of this printer is its super quiet mode, it really does make a difference when you're using it. While the printer is still noisy when compared to an inkjet or a laser you

don't get an uncontrollable urge to smash it up with a baseball bat when it's producing the fiftieth copy of a picture. Picture output is slower when in quiet mode.

The printer arrives in Epson mode so you can get to work at once. Paper is automatically drawn into the printer when you place it in the guide, again, you can get a cut sheet feeder as an extra. There's a hint of banding in the dark areas of the picture but nothing to get upset about, colours are generally bright, clear and well contrasted. Good results all round.

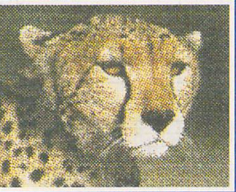
STF RATING: 83%



24-PIN PRINTERS



Citizen Swift 240C
PRICE: £304.33
FROM: SILICA SYSTEMS
CONTACT: ☎ 081 309 1111



Quite a lot of banding from this model gave it the thumbs down in our tests, although on the plus side it's a sweet little printer - rather tight and compact. Ooer.

For a 24-pin printer this is a very compact little beast so can fit it in your spare bedroom without any problems. All Citizen printers use the Command Vue control panels to set them up. They take some getting used to but are comprehensive with an LCD readout and four buttons to make your selections with. Clever and effective.

The Swift 240C is a mono printer with an install-it-yourself colour kit provided. You might have a bit of a problem fitting the

colour kit, since it's easy to put the thing in upside-down, but once you've rectified this you can install it without any problems. It's a noisy printer, even in quiet mode, and its long, drawn-out whine is at least different to a constant clacking but you can get used to it.

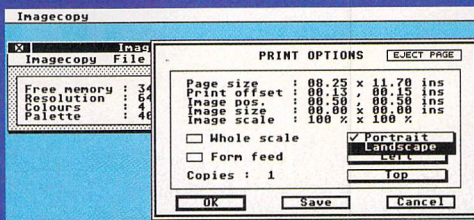
Picture quality is quite good, with good colour differentiation and contrast although there are marked problems with banding over the entire picture.

STF RATING: 69%

magenta, yellow) or CMYK (cyan, magenta, yellow and black) ready for printing. These are the colours found on colour dot matrix printer ribbons and multi-colour ink cartridges for the HP Deskjet. You need four cartridges containing the correct colours.

The paper is passed through the printer using the first colour cartridge, when this is complete

■ From this control panel you can determine the final look of your picture on paper. Choose between landscape and portrait output and even define the actual size of the picture in inches.



the program asks for the next cartridge to be inserted. This takes

place three or four times. This continues until all the colour cartridges

have been used. It's important that the paper is aligned perfectly to produce a good quality picture. This is fine if you are using a printer with some kind of paper tray or sheet feeder, but you may have problems if you have a standard printer. Both *HPChrome* and *BJChrome* are Shareware and cost just £5 each to register, definitely a bargain. Excellent stuff.

Citizen Swift 90 Colour

PRICE: £198.58

FROM: SILICA SYSTEMS

CONTACT: ☎ 081 309 1111

Another compact desktop machine, the Citizen 90 is the slowcoach of the bunch of printers tested, and probably the noisiest too. It is, however, remarkably easy to set up and use and the quality of the output is quite good. As with the 24-pin Citizen, the Swift 90 comes with

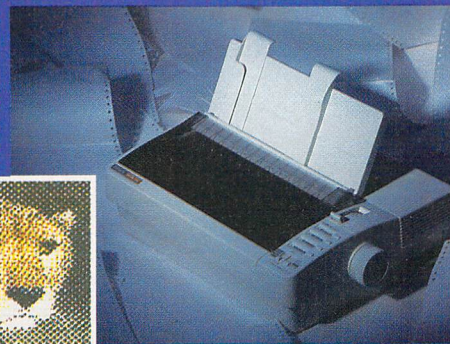
a colour printing kit that you install yourself, this can be a bit tricky if you can't understand the pictures in the manual. Once you've installed it you never have to worry about the colour kit again, it just remains in the printer. It is still a mystery why these colour kits are not installed at the factory, it would prevent a lot of "colourful" language. (Sorry about that crap joke.)

Picture output from the Swift 90 is fine, with just a little banding

in parts of the printout. Colours are bright and the overall print contrast is good.

STF RATING: 75%

■ Noisy and slow but cheap with a reasonable output. That sums this printer up. You pays your money and... well, you know the rest of it.



Star LC-100

PRICE: £222.08

FROM: STAR MICRONICS

CONTACT: ☎ 0494 471111

■ No banding at all in this picture gives this printer the **FORMAT Gold award** it so rightly deserves. The colour's pretty good and it definitely looks the best of the 9-pins.



Small and compact, that's the LC-100. A direct descendant of the fabled LC-10 colour printer, the LC-100 gives good quality output at an affordable price. While it doesn't have as many functions and options as some of the other printers on test here, it still has a good basic specification and is reliable. It's easy to set up the printer and

the output is the best from any of the 9-pin printers we tested.

The colour contrast is excellent and the colours themselves are bright and clear, there is no sign of banding at all in the picture. A brilliant little printer. The only minor point is the quiet mode, it's not very quiet at all.

STF RATING: 90%

How the 9-pins shape up...

Printer	Quiet mode	Print speed Graphics	Print speed Text (CPS) Draft/NLQ	Picture quality	Fonts	Emulations	Price	Rating
Citizen Swift 90	Noisy	Very slow	375/99	Good	2/6NLQ	Epson/IBM	£198.58	75%
Panasonic KX-P2180	Good	Slow	240/38	Good	3/6NLQ	Epson/IBM	£264.38	83%
Star LC-100	Noisy	Slow	180/45	Very good	1/3NLQ	Epson/IBM	£222.08	90%
Star LC-200	Noisy	Slow	225/45	Fair	2/4NLQ	Epson/IBM	£304.33	72%
Star ZA-200	Good	Slow	420/84	Good	2/4NLQ	Epson/IBM	£492.33	80%

Key CPS - characters per second LQ - Letter Quality NLQ - Near Letter Quality

■ Now this little beauty won't take up too much room on your desktop, so there's plenty of space to set up that little business printing posters you always promised yourself you'd get round to one day.

Seikosha SL-95 Colour

PRICE: £222.08

FROM: SILICA SYSTEMS

CONTACT:

☎ 081 309 1111

Another small printer, the Seikosha comes up with almost, but not quite, the best quality output from the 24-pin machines on test. Print speed is adequate coming in midway

between the rest, and it is quite noisy even when in quiet mode.

Setting up is swift and simple, with no messing about with

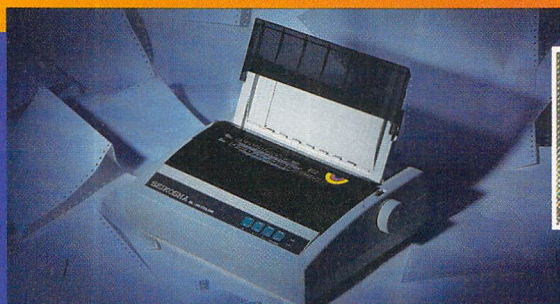
rollers or colour kits to slow you down and put you off if you're faint-hearted about this sort of thing.

A simple and plain control panel adorns the front of the machine with a minimum of con-

■ Lots of good contrast and bright colours make this one of the better printers on test - it is even easy to set up and the print speed isn't really too bad. Think about this one - the price is quite reasonable as a bonus.

trols. It's not perfect, though, since there's a little banding in the test picture. Colours are good, but not quite as clearly defined as the Swift 240C, and the contrast is excellent. A printer worth considering.

STF RATING: 70%



Star 24-200

PRICE: £391.28

FROM: STAR MICRONICS

CONTACT: ☎ 0494 471111

Star printers seem to be getting bigger as each new model appears. The LC24-200 is a good deal larger than the 9-pin machines and has a more robust feel to it; you need a decent sized space to set it up.

You might find it difficult to install the roller

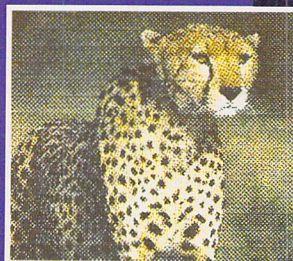
unit, the manual is a little hazy about placing it correctly and there's no reason why it's not already installed when you get the machine.

You can get excellent results from this printer at 180dpi, colours are bright and well contrasted and there is no discernable banding in the dark areas and it is fast; the printout took half the time of the 9-pin printers.

Picture quality at 360dpi is not quite as good and it shows visible banding. A bit on the noisy side for prolonged use although it does have a quiet mode that slows down the printing.

STF RATING: 78%

■ A big 'un, this. Cor. Anyway, it, er, prints well and is an excellent paperweight. And printer.



Panasonic KX-P2124

PRICE: £264.38

FROM: PANASONIC UK LTD

CONTACT: ☎ 0344 853551

Just about the fastest printer of them all, this Panasonic can churn out pictures as fast as you can send them to the printer, even at 360dpi. The KX-P2124 is really designed for office use but it is small enough to squeeze onto your desk at home without much difficulty. Other facilities include the multiple fonts and paper paths

■ Lots of speed and lots of features, shame the printing quality isn't up to much, since that's one of the most important considerations.

where the paper can be fed from above, behind and underneath.

While it's fast and quiet, the picture quality isn't of a very high quality. The colours and contrast levels are fine, but there are some distinct banded areas in both the dark and light sections of the picture, this is the only aspect to let the printer down.

STF RATING: 83%

Star XB24-200

PRICE: £609.83

FROM: STAR MICRONICS

CONTACT: ☎ 0494 471111

With this printer you move into the top range of colour dot matrix printers. This huge machine has every feature professionals need like multiple LQ fonts, two super LQ fonts,

very fast draft print speed and excellent graphics reproduction. All at a price of course.

Star's design philosophy of smart, easy-to-use machines has been continued in their professional range, and this quick, quiet machine is as good as a colour 24-pin dot matrix printer can possibly

get. It is the quietest machine on test here and is probably the quickest as well.

Picture quality is excellent with little or no banding visible in the printout, clearly the best 24-pin printer tested, and the most expensive. It oozes quality.

STF RATING: 85%

Discover how the 24-pins compare

Printer	Quiet mode	Print speed Graphics	Print speed text Draft/NLQ	Picture quality	Fonts	Emulations	Price	Rating
Citizen Swift 240C	Average	Slow	300/99	Good	1/10LQ	Epson/IBM/NEC	£304.33	69%
Panasonic KX-P2124	Very good	Very fast	320/106	Fair	3/8LQ/1SLQ	Epson/IBM	£264.38	83%
Seikosha SL-95	Noisy	Slow	240/107	Good	1/9LQ	Epson/IBM	£222.08	70%
Star 24-200	Good	Fast	222/66	Good	3/5LQ	Epson/IBM	£391.28	78%
Star XB24-2002SLQ	Very quiet	Fast	375/99	Very good	1/7LQ/	Epson/IBM	£609.83	85%

Key CPS - characters per second LQ - Letter Quality NLQ - Near Letter Quality

■ The most lovely little 24-pin printer you could possibly hope to set eyes on - or even have in your home. Especially considering this is really an office machine.

INKJET PRINTERS

Hewlett Packard 550C Deskjet

PRICE: £633.33

FROM: HEWLETT PACKARD

CONTACT: ☎ 0344 369369

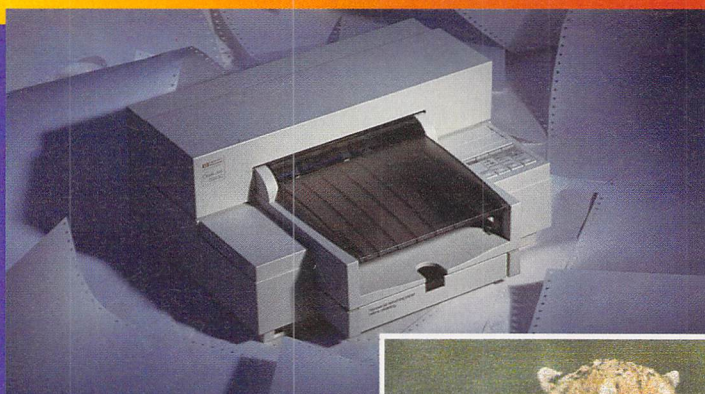
There's one colour inkjet printer that everyone's heard of, and that's the HP Deskjet. Rightly praised for its swift, near silent output, the quality of the printouts from a Deskjet printer puts even the best 24-pin in the shade.

The top resolution is bit lower than a 24-pin printer is at 300dpi but this is counter-balanced by the near perfection - or as near as you'd expect - of the final pic. The

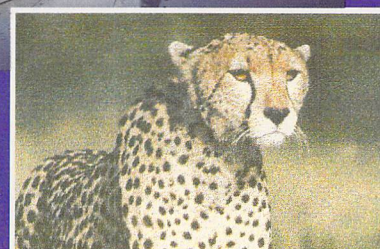
Deskjet has no emulations built-in, so you have to use HPChrome or Imagecopy Colour 2 in order to print your pictures. It has six built-in fonts and prints out at about three pages a minute in text mode, but it's inevitably a bit slower in graphics mode.

The only real problem with the Deskjet is that you need to let the paper dry before you touch it and that some types of paper soak up the ink too much and blur the picture. Colour and contrast from the Deskjet are excellent and there is little or no banding. Best of all, it's virtually silent.

STF RATING: 85%



■ Of course, inkjet or laser printers are ideal if you can afford them. The chances are that you won't be able to, however. Anyway, we tried this inkjet. And thought it was lovely.



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9-PIN 80 COLUMN 300CPS



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- 9-Pin Dot Matrix
- 80 Column
- 300cps SD, 240cps D, 60cps NLQ
- 21K Printer Buffer + 5 Fonts
- Parallel and Serial Interfaces
- Graphics Resolution: 240 x 144dpi
- Epson and IBM Emulation
- Friction Feed and Push Tractor
- Paper Parking Standard
- Optional Auto Sheet Feeder Unit
- FREE Silica Printer Starter Kit

PRINTER RRP £185
STARTER KIT £25
TOTAL VALUE: £210
SAVING: £71
SILICA PRICE: £139

£139
+ VAT = £163.33 PRI 8204

24-PIN 80 COLUMN 240CPS



- Seikosha SL-90
- 24-Pin Dot Matrix
- 80 Column
- 240cps SD, 192cps D, 84cps LQ
- 20K Buffer + 2 Fonts
- Optional Font ROM
- Parallel Interface
- Graphics Resolution: 360 x 360dpi
- Epson LQ850 Emulation
- Built-In Semi-Automatic Cut Sheet Feeder - Paper Parking, Auto Paper Load - Optional Automatic CSF
- FREE Silica Printer Starter Kit

PRINTER RRP £199
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SAVING: £65
SILICA PRICE: £159

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- FREE Silica Printer Starter Kit

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- Quiet Operation 46db(A)
- Compact Design with Straight Paper Path
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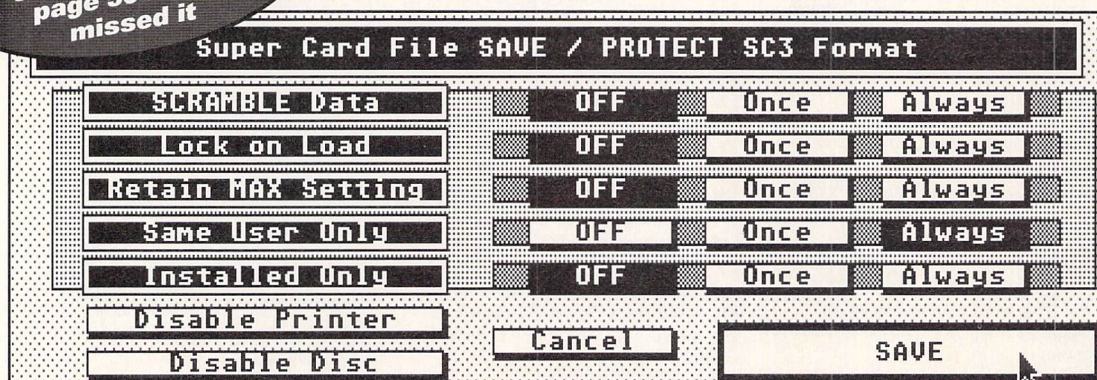
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SUPERCARD 3

Last month we gave you the latest version of **Supercard**. Clive Parker guides you through some functions

Check out Cover Disk 50 for details of registration - turn to page 50 if you missed it



Databases are not exactly the most exciting things to look at or use, are they? You hardly break out in a cold sweat when the parcel containing your new database arrives on the mat. Still, they are extremely useful and effective tools if they are used correctly.

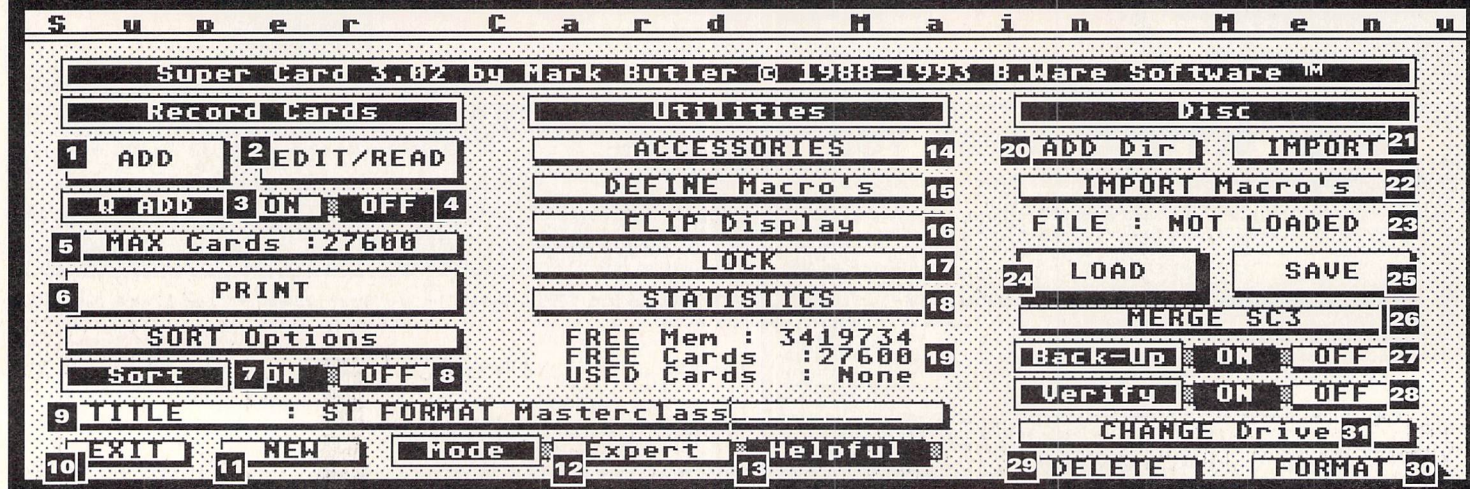
The problem with most databases is that they take quite a bit of time to get used to. *Supercard 3* is a relatively easy package to get to grips with, it contains some rather complex looking menu screens and

You can scramble data so only Supercard 3 can read it, lock files so nobody can load them without entering a code, set the maximum settings, and the installed only option means that your files cannot be loaded into uninstalled copies of Supercard.

PLAY YOUR CARD RIGHT

At first glance the main menu looks very complicated but it is, in fact, very simple. To find out just how easy it is to use, read on ...

- | | | |
|--|--|--|
| 1 Add: add a new card to the file | 10 Exit: quit the program | 22 Import Macros: load macro sets |
| 2 Edit/Read: edit or read existing cards in the file | 11 New: abandon file in memory and start new file | 23 File: filename of current card file loaded |
| 3 Add On: takes you straight to the add new lines option | 12 Expert Mode: alerts are disabled | 24 Load: load a card file to disk |
| 4 Add Off: defaults to the main add menu | 13 Helpful Mode: helpful alert boxes are displayed at various points | 25 Save: save a card file to disk |
| 5 Max Cards: the maximum number of cards available in a file | 14 Accessories: access Desk Accessories | 26 Merge: merge an existing file with the card file in memory |
| 6 Print: generate printout of the file | 15 Define Macros: Assign text to function keys, up to six sets in all can be defined | 27 Back-Up On/Off: automatically renames current loaded file to .SCB instead of SC3 |
| 7 Sort On: enable sorting | 16 Flip Display: invert screen colours | 28 Verify On/Off: enables alerts asking you if you want to continue with the selected action |
| 8 Sort Off: disable sorting | 17 Lock: enter a password to protect all your files | 29 Delete: erase a file on disk |
| 9 Title: current card file in memory | 18 Statistics: displays file and system statistics, can be printed if desired | 30 Format: format a floppy disk |
| | 19 Current general statistics | 31 Change Drive: select default disk drive |
| | 20 Add Directory: read a disk directory into a card | 32 Sort Options: go to sort menu |
| | 21 Import: read ASCII text files into cards | |



filter options but here there isn't any of that mucking about designing and defining fields.

This is because each "card" used by the program is a blank screen where you can enter plain text, so you are not restricted to a series of near identical screens displayed one after another. In this way you can create a customised series of databases that look

"Filters are usually found on camera lenses or in coffee machines, so how are they used in a database?"

exactly as you want them to look, and not how the program forces you to create them. Cards can be larger than a single screen so all the relevant details can be stored on a single card, you scroll through the multiple "pages" of a single card by using the <+> and <-> keys. You move forward and back through the cards in the file using the up and down cursor keys on the keypad.

Super Card Statistics

Super Card 3.02 Filter Search Menu

Group 1 Filters		Logic = AND	Search ?	Case ?	Title ?
1			AND	NO	NO
2			AND	NO	NO
3			AND	NO	NO
4			AND	NO	NO
5			AND	NO	NO

Group 2 Filters		Logic = AND
6		
7		
8		
9		

Groups 1 + 2 Link Logic = AND

CLR Date CLR Group 1 CLR Group 2

Range : 00001 To : 00001 Total : 00001

Date From : To :

Wild Card : ? ☒ V Wild ☐ VV ☐ V 2000 Fix :30

Div : DMV MAIN Menu CLR ALL

Div / MDY Num ADD Un-Hide

U/D :- Link :0 Select ALL

FILTER

■ Ah, yes. Filters. It's not that bad really. The filter options that you are most likely to use will be AND, NOT and OR to find specific names and cards. Still, it's reassuring to know that the other options such as the ability to search by upper case or lower case or by title are there if you need them.

Using filters

Filters are usually found on camera lenses or in coffee machines, so how are they used in a database? Well, the filter system that is built into Supercard 3 enables you to search for specific words or phrases within your card file, and because you can search using logical operators like AND, OR and NOT then you can either view every card that includes the search string or every card that excludes the search string.

To make the search facility even more powerful, you can

define up to nine different search strings to search with. So if you want to look up addresses you could look for everyone on your files who lives in Milton Keynes who owns a 1MByte STE, a hard drive, a Vauxhall Astra and is left-handed. Alternatively, you could use the NOT option and omit everyone in Milton Keynes.

There are other search methods built in, you can search by date, upper case and lower case letters, wild cards and even by the type of divider you use for your dates! The Title option of the filter

specifically searches for your string in the first line of each card, the title line.

Saving options

When you select the save option in most programs it just saves the file to disk, with Supercard you get yet another option-packed menu. You can save various parameters with your card file which take effect the next time the file is loaded so you can protect your top secret files.

The many unique features of Supercard 3 and its simplicity make it a very powerful database. **stf**

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From flash-floods in mid-west America to the collapse of the European Monetary System, the forces of chaos appear to have an unpredictable and destructive momentum. Yet chaos theory has provided the world with some of its most beautiful images. How?

its cues from nature and is based on the concept that all complex organisms originate from just one simple idea. For example, a 40-foot oak tree consists of a complicated network of branch and root systems, but its essence can be found in the pattern of veins on a single leaf. It's this discovery which makes fractal generation on

back into an equation which produces even more complex numbers to feed back into the equation. Each time a complex number is

Fractal Landscape is a brilliant fractal animation package which enables you to zoom around a landscape in the comfort of your own home



First you have to generate a contour map of your landscape. You can type any four figure number into

the Random Seed box to get a landscape, but you preferably want one with a good mixture of mountain peaks and shoreline. Click on 3D view to see what your landscape looks like. You can also shade it for added realism.

The next stage is to choose up to 11 key frames for your anima-

tion – each key frame gives the camera a different starting point, so you're given an impression of movement when you play the animation back. Each key frame is linked by a series of intermediate frames which turns your animation into a fluid film – the more intermediate frames you have, the smoother the result is going to be.

This is the time to pop off and make yourself a cup of tea while your ST renders each individual frame. The more frames you have the longer the animation takes to render. When it's finished click on Playback from the Animation menu to view your landscape in all its glory. If you want a bit of

Turn the world of music upside down with some unearthly vibes from Oscar's Fractal Music generator

1 Fractal Click here to send to activate to cycle the program through the Loops parameters you have set. Each loop iterates a notes or series of notes in a similar way to the

fractal generation processes in an image-drawing program.

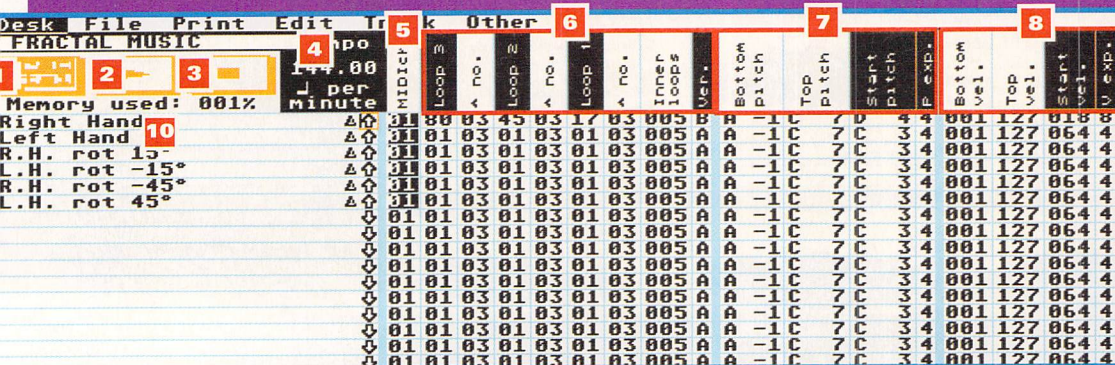
2 Play Click here to play back tracks or the complete recorded piece.

3 Stop This stops the MIDI output from a track during Play or Fractal modes.

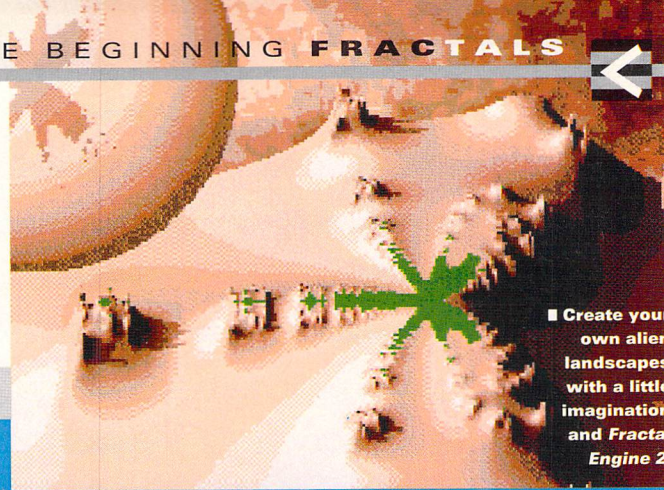
4 Tempo Enables you to change the speed of the music currently held in the memory.

5 MIDI Channel Tells you which MIDI channel each track is currently sending its output to.

6 **Loops** *Fractal Music* incorporates four different looping parameters which enable you to fractate a track. Loops 1, 2 and 3 enable the program to iterate variations in Pitch, Time and Velocity to



CHAOS



■ Create your own alien landscapes with a little imagination and Fractal Engine 2

THE BIRTH OF CHAOS

Edward Lorenz was one of the first Chaos Scientists. His research into global weather systems changed the way we look at the world

Toy Weather was a computer-based simulator which calculated numbers like a climate generates clouds and rainfall. From the study of this simulator, Lorenz believed it was possible to predict how weather evolved.

One day Lorenz decided to cheat a bit and punched in some numbers from the previous day's printouts before setting the simu-

lator running. When he examined the result he was shocked to discover that *Toy Weather's* normally predictable patterns had changed beyond all recognition. It was then Lorenz realised his simulator calculated the weather to six decimal places, but that the printout only printed the first three numbers after the decimal point – Lorenz had inadvertently rounded up *Toy Weather's* calculations and changed the weather.

The fact that such a small arithmetical change could cause such a large difference in

outcome led Lorenz to conclude that long-term weather-forecasting was impossible – even the tiniest inaccuracy in a weatherman's calculations could send him down a meteorological blind alley. Lorenz's discovery became known as the **Butterfly Effect**, since if his theory is correct it's possible that a butterfly flapping its wings in part of the world could reverse the direction of a hurricane in another.

reiterated, the equation subtly changes its form, creating even more possible numbers for you to deal with. Because the fractal gen-

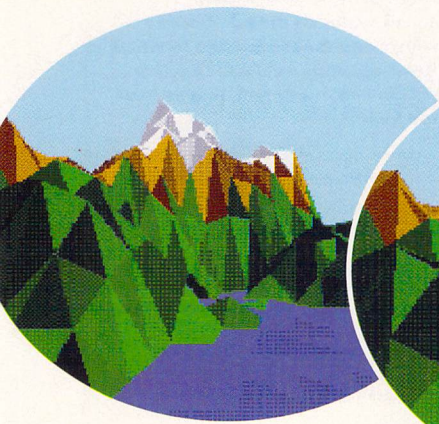
eration process is so complicated – imagine doing all those sums in your head – you can get your ST do all the donkey work, while you take the credit for producing wonderful

images like the ones shown on these pages. If you want to know more about history of fractals take a look at the Story of the Hues box on the next page.

Because the maths behind fractals is so important to the way they're generated, it's worth acquainting yourself with the basic

concepts involved. All fractals are based on a mathematical concept – imaginary numbers. If you're any good at maths you know it's impossible to generate a negative number by multiplying another number with itself. To overcome this, mathematicians invented a number called i which is the square root of -1 . This imaginary or complex number is always written in the form $2+3i$ where 2 is the real part and 3 is the imaginary part.

When you feed this complex number into an equation with another complex number it behaves very oddly – you have to add the real part of the first number with the real part of the second number, then do the same with the imaginary part of each



variation in the colour scheme you can choose from 12 different land types and vary the shading of both the sea and the sky. Quite marvellous. Now all you have to do is invite all your friends and rel-



atives around and impress them with your Spielbergian talents.



YOU HOW WITH **FRACTAL MUSIC**

individual notes, the Inner Loop tells you how many times an individual track is iterated when you press the Fractal button.

7 Pitch

Certain MIDI instruments work best in a limited octave range. The three columns here enable you to set an upper and lower Pitch limit for the sound you're working with.

8 Velocity

Basically, this means how hard you hit a key on a keyboard or how loud an individual sound is when it's played. The Top and Bottom Velocity columns indicate the range of an individual track's velocity, that is the limits

to which a sound goes from loud to soft.

9 Track number

Fractal Music enables you to write sequences to 16 different tracks at once so you can build up complicated sound pictures which can be replayed via MIDI.

10 Track name

Tells you which MIDI output each track is currently dedicated to, the icons on the right of the track title box enable you to choose which tracks you want activated when a piece is played back. The red cursor box tells you which track is currently selected.

Turn to page 44 for more on Fractal Music.

SPHERES, SPIDERS AND THE GEOMETRIC LANDSCAPE

Because your ST can reproduce the stunning random fractals found in nature, it means you can create an infinite variety of realistic-looking landscapes with Fractal Engine 2

1

First generate a backdrop for your landscape by using the Clouds option. Click on the Types sub-menu, then select Clouds and click on Choose to go back to the main menu. Now select Method to choose either natural Sky or the Plasma clouds. Experiment with the default parameters to create different cloud effects, then click on Draw to create your skyscape.

2

Now select one of the seven fractal types which enables you to generate a 3D landscape - Quadrant, Spider, Cubic 1, Cubic 2, Conjugate, Jellyfish or Mountains, then change its parameters by clicking on the CD button. Now go to Method and select Scape, then Draw to generate your picture. Fractal Engine 2 enables you to overlay the landscape directly over your cloud backdrop

3

To make your pictures look even more stunning you can create further fractals using the Sphere option which maps them onto a globe. You can create as many different spheres as you like, change their size and place them on your picture. Now choose a colour scheme from one of the 35 default palettes or create your own to give your landscape that touch of individuality - the Swirl option is useful for cycling through the different shades in a palette to give your landscape a different look.

number, so it looks something like this: $5+4i + 6+3i = 11+7i$.

When you start to multiply complex numbers with each other, things get really complicated: $5+4i$ times $6+3i$ becomes $(5*6) + (5*3i) + (4i*6) + (4i*3i)$, then $(30) + (15i) + (24i) + (12i \text{ squared})$. Because i is the square root of -1 , $12i$ squared becomes -12 . This means the equa-

tions totals $18+39i$. It's calculations like this which form the basis for all the algorithms used in fractal generation, calculations which take place thousands of times to generate a single image. However,

things don't just stop there.

Fractal generation on your ST is split into two different camps. Random fractals enable you to create naturalistic shapes like those of plants, clouds or even complete landscapes - the Fractal Landscape generator from STF 43's Cover Disk is an excellent introduction. You can also create your own landscapes in Fractal Engine 2 - see the Spheres, Spiders and Geometric Landscapes above. Deterministic fractals, however, are altogether

more surrealistic. They're based on the self-similarity principle where a single idea is replicated endlessly on an ever-decreasing scale - Sierpinski's Triangle and Helge von Koch's Snowflake are both examples of deterministic fractals, so too are the Julia fractals you can generate with Fractal Playtime on this month's Cover Disk.

Animation now

The great thing about fractals is that you don't just have to sit there and marvel at their intricate patterns - you can animate them. One of the simplest ways is by using

■ This beautiful image is just one of the thousands of Julia fractals contained in a single Mandelbrot set. It was created using the Julia option in Fractal Engine 2.

STORY OF THE HUE

Most scientific discoveries are happy accidents and fractals are no exception. Here's a brief look at the theories and personalities that make it all possible

Gaston Julia was one of the first mathematicians to formulate the theory of fractal geometry in his book *Sur l'iteration des Fonctions*, published in 1918. Conventional geometric formulae created shapes which satisfied the demands of a given equation, so $x \text{ squared} + y \text{ squared} = 1$ creates a circle. However, Julia used numbers in his formulae to create further numbers which were also fed back into the equation. This evolutionary process is known as iteration and means you never actually satisfy an equation, but are taken one step further in its development - the equation becomes dynamic, like a living organism. Unfortunately, Julia didn't have the facility to create sophisticated images of

the geometric patterns he discovered, but you can - Julia Sets are one of the most common forms of fractal found on your ST.

Another influential figure was Helge von Koch who created the Snowflake fractal in 1904. He achieved this by replacing the middle third of one side of a triangle with two sides of another smaller triangle until a 12-sided shape was created. This replacement process was then carried out on every side of the 12-sided shape to create the Koch Curve or snowflake. As with any fractal, it's possible to carry this process on indefinitely so you constantly add and redefine the original pattern.

While Julia and Koch were key players in the development of fractal generation, it was Benoit Mandelbrot who popularised it. Mandelbrot was a leading mathematician who worked at IBM and Harvard in the 1970s and was fascinated by the work of Julia and his contemporaries. Mandelbrot discovered a

way of cataloguing Julia Sets which explored every one of their geometric iterations. However, the process was too complicated for the mainframe computers of the time and Mandelbrot opted for a simpler mapping system based on a series of mathematical loops. It was then Mandelbrot discovered a series of disks appearing on the map. On closer inspection these disks were found to have an intricate web of sea-horse like spirals spinning off them, which also contained miniature disks and yet more spirals. However, Mandelbrot's discovery was unlike Julia's own fractals - instead of remodelling itself into infinity, it continually looped in on itself. Because Mandelbrot Sets - as they are known - were so colourful and dramatic they marked the beginnings of computer art and were soon to be found on T-shirts, album covers and New Age posters. Even the paisley patterns on your pyjamas are inspired from Mandelbrot sets. Probably.

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See how the LP1200 compares

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Straight Paper Path	-	NO	(ONLY FACE UP)	YES	YES
PCL-5 Printer Command Language	-	YES	-	YES	YES
HP-GL/2 Vector Graphics Included	YES	YES	-	YES	YES
Resolution Improvement/Enhancement	YES	YES	YES	YES	YES
Standard RAM	1mb	1mb	512K	1mb	2mb
Full A4-300 dpi graphics with standard RAM	-	-	-	-	YES
Warm Up Time	33 secs	25 secs	<60 secs	60 secs	45 secs
First Page of Text Output	-	15 secs	31 secs	18 secs	<15 secs
Document Description Language included	-	-	-	-	YES
Flash ROM	-	-	-	-	YES
Flash ROM Upgradeable Firmware	-	-	-	-	YES
PCMCIA Card Slot	-	-	-	-	YES
Scaleable Resident Fonts - in HP LJ III Emulation	0	8	0	8	8
Resident Bit-Mapped Fonts	10	14	2	14	14
AGFA Intelligent Scaleable Font Technology	-	YES	-	YES	YES
HP LaserJet III Emulation Included	-	YES	-	YES	YES
EPSON FX Emulation Included	-	YES	YES	YES	YES
IBM ProPrinter Emulation Included	-	YES	YES	YES	YES
Standard Tray Capacity	200	150	70	200	100
Protective cover on standard tray	YES	-	YES	YES	YES
Cost per copy**	1.9p	2.0p	2.1p	2.2p	1.65p
Min-Max Paper Weight in gsm	60-163	60-157	60-105	60-135	60-169
Flash ROM Upgradeable Firmware	YES	YES	YES	YES	YES
Ability to print on OHP Film	-	-	-	-	YES
Standby - Noise Level	38dB(A)	35dB(A)	<43dB(A)	<43dB(A)	<38dB
Printing - Noise Level	50dB(A)	46dB(A)	<53dB(A)	<53dB(A)	<48dB
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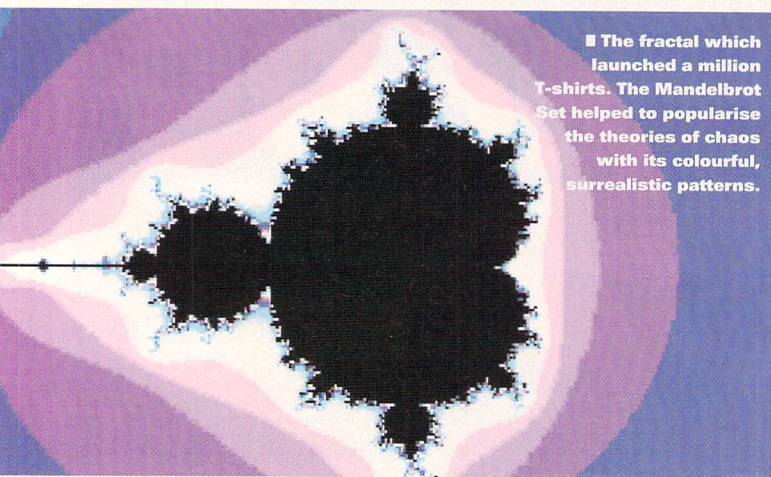
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■ The fractal which launched a million T-shirts. The Mandelbrot Set helped to popularise the theories of chaos with its colourful, surrealistic patterns.

the Swirl option in *Fractal Engine 2*, it cycles a pre-defined colour palette across your fractal creating all kinds of psychedelic patterns. *Trendy Handy Randy Hendy Bendy Mandy* from Cover Disk 34 offers a similar thrill, but offers a good deal more sophistication.

If you want to experience a flight through your own ST-generated world then try *Fractal Landscape* from STF 43's Cover Disk – turn to page 50 to order your copy if you missed it. *Fractal Landscape* enables you to create incredibly realistic seas, forests and snow-

capped mountains which you can explore with the help of a roving camera. You simply tell your ST which pieces of the landscape you want to "film" and it renders and animates it all for you. It's just like charging down a fjord in your own private jet.

Musical kaos

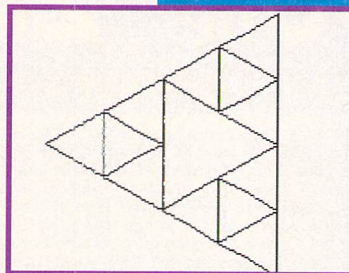
There's more to fractals than pretty images, though. You can also use them to make music on your ST. Programs like *Fractal Music* (£65 Oscar Music ☎ 071 377 6294) or *Fractal Music Composer* (£67.50

Hugh McDowall ☎ 071 263 5755) enable you to hook up a simple MIDI instrument – a keyboard, for example – and generate beautiful musical patterns in much the same way you create fractal pictures. The mathematics behind both is the same – both picture and music fractals are based on a series of random numbers endlessly feeding back on themselves. As a musician, this means you don't have to sit there for hours trying to come up with a decent riff because a fractal music program can generate an endless quantity of different patterns for you to toy around with. Naturally, you can assign any fractal piece to different MIDI tracks, so the patterns can be used for different instruments. It doesn't even matter what musical genre you're into, because fractal music can be applied equally to rave, pop or the classics. One thing's for sure, even if your composition owes more to Schopenhauer than Dannii Minogue no-one's going to have heard it before.

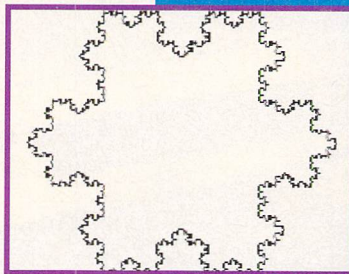
If you want to hear some professional fractal music get a copy the *Fractal Visions* tape (£5.70 from Future Age Music Express ☎ 081 889 0616). **stf**

■ No matter how closely you examine a Mandelbrot Set there are always plenty more undiscovered areas for you to explore.

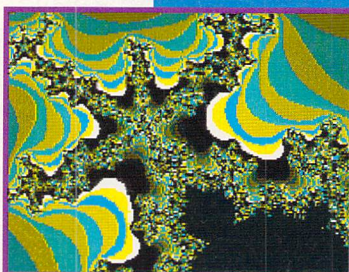
A BRIEF HISTORY



■ Wacław Sierpinski's Triangle was one of the first true fractal images. It's created by sub-dividing an equilateral triangle into smaller versions.



■ Helge von Koch's experiments with fractal images in 1904 enabled him to reproduce one of nature's most intricate structures – the snowflake.



■ Benoit Mandelbrot's classic fractal shape helped spread the theories behind chaos to a wider audience.

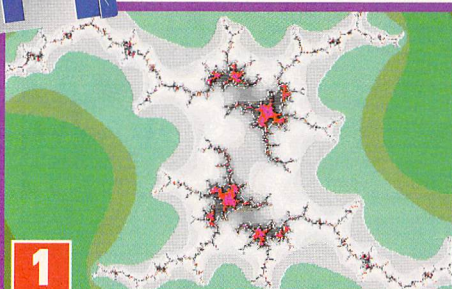


■ Fractals come in all kinds of weird shapes and sizes. This Spider fractal is surrounded by its smaller offspring.



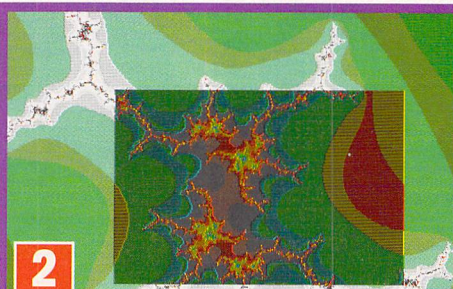
FRACTAL ZOOM

Fractal Playtime is a new fractal generation program for the ST, TT and Falcon. It enables you to create all kinds of jazzy images with up to 256 colours at your disposal – see this month's Cover Disk



1

First *Fractal Playtime* loads one of its default fractals for you to have a gawp at. You can change the colour scheme at any stage by simply selecting Edit Palettes from the H menu.



2

Next, choose the section of the fractal you want to enlarge. You can do this by holding down the Left Mouse Button and dragging a Zoom box around the bit that you want to see.



3

Finally, select Zoom In from the Show menu and your ST generates the new fractal for you. Do this a few times and you could end up with a picture like this. Check out the demo on this month's Cover Disk.

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DEALING WITH HARD DRIVES

Just owning a hard drive isn't enough, you've got to be able to treat it right so it doesn't eat all your files. Clive Parker shows you the tricks to make the most of your drive - read and absorb, this could prevent serious hair loss

BOOT THAT SYSTEM

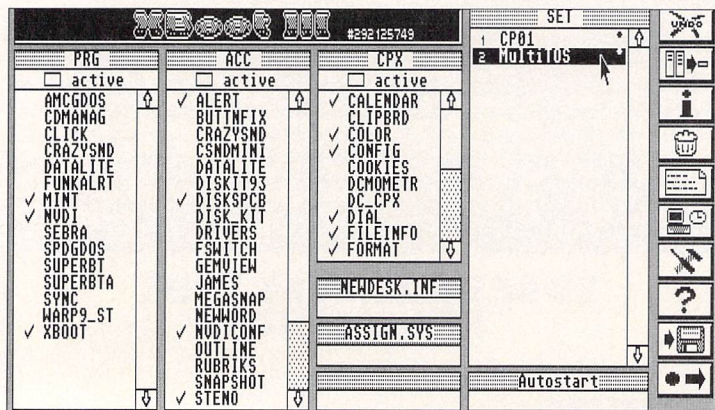
Choose the Desk Accessories and AUTO programs you want every time you boot up by using a boot selector program. It works like a menu system. This type of utility is particularly useful if an Accessory or AUTO program clashes with another program; you can re-boot and deactivate the offending Accessory without getting locked out of your hard drive - this can actually happen.

Selector programs also enable you to select the screen resolution to determine which ASSIGN.SYS file you want to use with SpeedoGDOS and set many other parameters. Try either X



■ Superboot is an excellent Shareware utility and provides all of the functions in this bit - and a few others too. It's a superb construction set program enabling every parameter to be set in advance or altered later. Here we are setting up a series of options assigned to a function key.

Boot 3, HiSoft, £34.95, ☎ 0525 718181 Superboot 7.4, ST Club Disk UT1.277, £1.45 ☎ 0602 410241.



■ Xboot 3 is the acknowledged master among boot selector programs (bet you didn't even know there was such an accolade!) and the latest version is by far the most comprehensive boot utility program you can get.

The most useful peripheral that you can ever add to your ST setup is a hard drive. They are fast, convenient and can store huge volumes of data. In fact, if you intend to do any kind of serious work with your ST at all, a hard drive is an absolute necessity - and something you won't be able to live without again.

The problem with storing all your data on a hard drive is you run the risk of losing it all, so regular backup is essential. Simply finding files can be a chore if you can't remember where you put them, so

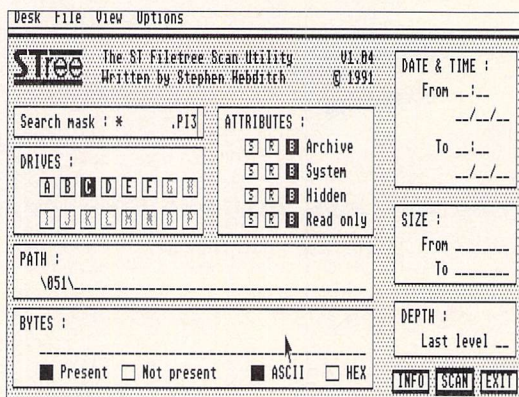
you must use some kind of logical method when storing files on disk.

Different tasks need a different setup. You probably perform graphics work in low res and run DTP, CAD, word processing and business applications in medium or high res, so you need to be able to choose what resolution to boot up in. You need a different group of Desk Accessories and AUTO folder programs so a program to organise these is a must. You can solve all these obstacles and plenty more using commercial, PD and Shareware programs.

FIND THAT FILE

You've just spent five hours creating the best picture you've ever come up with, saved it to your hard drive and gone down the pub. The following day you turn on your ST and you realise that you haven't a clue where-

abouts you saved it on the drive. Still, there's no need to panic. If you have an ST with TOS 2.06 installed, there is a search facility available from the File menu on the Desktop. If you don't have TOS 2.06 then there are several PD utilities that can do exactly the same the job for you.



■ The best PD program we found for searching your hard drive is STree. You can select the drive, path, size, date, attribute and file mask of the files you are searching for. It's on Disk GD746 (£2.75) from Goodmans International ☎ 0782 335650.

GET ORGANISED!

Be sure to sort everything out in a logical easy-to-follow way - remember that you're the one who has to find it. Split your drive into distinct areas, using a different partition for each type of software. Say you have a 50MBytes drive split into five partitions, drives C to G, you could set up your software rather like this:

Drive C - Desk Accessories, AUTO

programs and utilities, perhaps a text editor to look at doc files and your formatters.

Drive D - Word processing, DTP programs and text files.

Drive E - Art packages and graphics files. Scanner software.

Drive F - Sound sampler software and sample files. MIDI and music.

Drive G - Other "business" software like databases, address book software and spreadsheets.

ESSENTIAL MAINTENANCE

No matter how careful you are, there is always the chance that data could become corrupted in some way. There are two commercial programs available to enable you avoid the likelihood of this.

Cleanup ST is part of the ICD Professional Hard Drive Utilities. It's a program that examines all aspects of a hard drive's physical make-up, checking for errors in the FATs and root directories. The program also checks for bad sectors on the disk itself, clusters assigned to different programs and other errors. All problems can either be repaired automatically by the software or it asks you for confirmation. **Diamond Edge** has a similar set of utilities built into its medic functions,

enabling you to check the entire drive or individual partitions.

■ **Diamond Edge v1.10**, HiSoft, £49.95, ☎ 0525 717878.

■ **ICD Professional Utilities**, Ladbroke Computing International, £39.95, ☎ 0772 203166

■ **Diamond Edge**, now up to version 1.10, is the definitive hard drive utility program. It has options to back up, archive, optimise, test the disk structure, look for bad sectors, partition drives, copy drives as image, save and restore both SCSI and disk information. It's one hell of a program!

File Medic Optimize Undelete Archive Utility Help			
Disk Information			
Save Disk Info...			
Restore Disk Info...			
Save SCSI Info...			
Restore SCSI Info...			
Drive Usage Information			
	Total	Used	%Free
C	13,729,912	2,825,168	29.6
D	29,924,352	11,112,448	14.8
E	29,924,352	1,359,872	34.2
F	29,924,352	26,748,928	9.4
G	29,924,352	3,949,568	4.5
H	29,924,352	12,472,320	10.6
I	21,135,360	8,663,840	13.1
J			59.0
K			
L			
M			
N			
O			
P			
Grand Totals: 244,364,288 190,695,424 53,668,864 21.9			

BACK IT UP

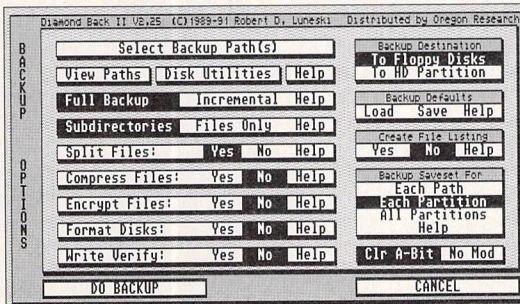
We know it's a pain to back up everything to floppy disk and it takes you all afternoon to do it, but there are ways and means of making the process less painful. You normally need about three standard floppy disks for every 2MBytes of hard disk space – if you do an image backup, that is. Copy every part of the hard drive so that you have an exact duplicate of it on floppy disk, including the empty space! Obviously this

takes a long time if you have a 100MByte drive. An alternative is to just back up the data on the drive. This takes less time and space. You can also compress the data as it is backed up, saving even more space.

Two very capable PD hard drive backup programs are *Hardup* and *Vault*, both available from Goodmans International.

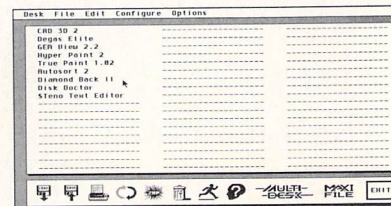
■ **Diamond Back 2**, HiSoft, £39.95, ☎ 0525 718181. ■ **Hardup** and **Vault**, Disk GD1187 £2.75, Goodmans International, ☎ 0782 335650.

■ Don't be put off by the complex looking menus in **Diamond Back 2**, everything is very simple once you get the hang of it and each option has a help function to explain exactly what you should be doing.



LAUNCH WHEN READY

An alternative to the GEM Desktop (and the various replacements) is a menu-based program to launch programs and applications. The whole point of the Desktop is to make your ST easier for you to use, so it seems a bit of a step backwards to use a menu system to run programs. **Hotwire** is a cunning little program that does just this and it makes launching programs a breeze. You simply click on each line of the menu page and the file selector pops up enabling you to choose the program to be stored in the menu. An excellent Shareware alternative is



■ Click on any of the program names in the **Hotwire** menu and the program loads instantly from your hard drive. When you exit the program you return to **Hotwire**, ready to run the next program.

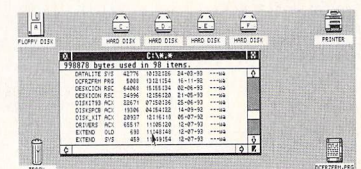
VDOS, it isn't as versatile as **Hotwire**, but it's still very useful.

■ **Hotwire**, System Solutions, £29.95, ☎ 0753 832212.

■ **VDOS**, ST Club Disk UTI.200, £1.45, ☎ 0602 410241.

KEEP IT ON THE DESK

Some of the new features of TOS 2.06 are very important when using hard drives. The file mask, search and file move options are all very helpful when organising and moving files. If you don't have TOS 2.06 then it is a good idea to invest in a replacement Desktop program, if you can't afford the brilliant **NeoDesk 3** then there are a couple of good PD programs available. The best is probably **Teradesk 1.30** which is very much like TOS 2.06 in operation. It includes the ability to place program and folder icons on the Desktop to be launched – a real time saver. You



■ **Teradesk** looks like the TOS 2.06 Desktop but it has a few of its own special features built in, as a bonus you can use the Desktop icons we gave you on Cover Disk 48 too.

can get **Teradesk** from any PD library or download it from the ST **FORMAT** BBS (☎ 0225 465977), file 397.

■ **Teradesk** Disk UTI.201, The ST Club, £1.45, ☎ 0602 410241.

■ **NeoDesk 3**, First Computer Centre, £34.95, ☎ 0532 319444.

USING YOUR TOOLS EFFECTIVELY

Most hard drive formatting programs automatically determine the optimum size for your partitions so you don't have to work things out for yourself. You can decide on your partition plan yourself but it's usually best to let the software work it all out for you. It makes life as simple as possible.

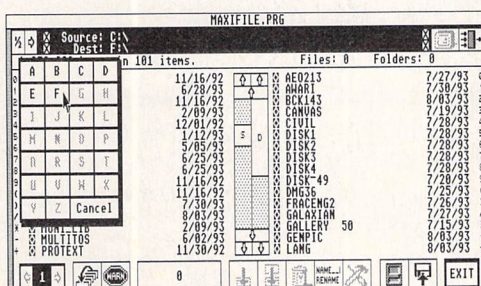
ICD Professional Utilities have just about the best formatting software available. Moving files about can be a real pain,

MaxiFile 3 is an excellent little program from System Solutions that simplifies moving files from drive to drive. Instead of all that tedious dragging of folders back and forth between windows, you simply have to select the source files and the destination path, a couple of mouse clicks later and all the files are transferred.

■ **MaxiFile 3**, System Solutions, £29.95, ☎ 0753 832212.

■ **MaxiFile 3** and **Hotwire** are available as a combined package for just £49.95, also from System Solutions.

■ Moving files has never been so easy. Move the mouse pointer around, click a few times and that's all there is to it. Well, there's also a suite of disk utilities built-in to help you get the most from your hard drive. It works as a Desk Accessory too.



Use your common sense

Engaging your brain first helps a lot... Back up partitions in some kind of rotation. Use the special option in **Diamond Edge** to save the disk information, this just saves the FATs, the boot sectors and the root directory sectors of your partitions. It's not as secure as a fully-fledged backup, but it has the advantage of only taking around ten minutes for a

245MBytes drive, and a lot less time than that for a 40 or 50MByte drive.

Always make sure you have the latest versions of your hard drive utilities, HiSoft and ICD improve and update their software continuously. Finally, backup your drive regularly and use good quality, branded floppy disks.

HURRY! GRAB

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STF COVER DISK

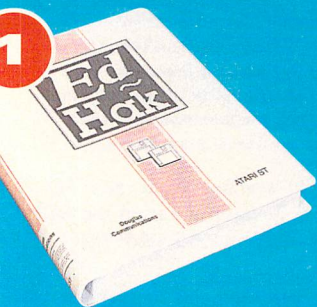
Our Cover Disks are filled with the top game demos, the greatest complete programs and the most useful utilities - it's the best value Disk for your ST anywhere



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CIVILIZATION

ED HAK



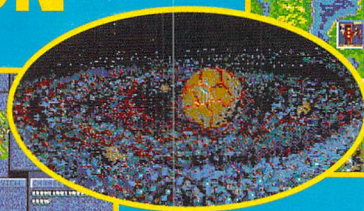
■ This amazingly useful Desk Accessory and program enables you to edit text, data, binary files, disk sectors and RAM.

"Ed Hak is a trouble-free and indispensable utility for the serious ST owner"

2



■ Civilization's a god game on a massive scale - this sim of life enables you control nations of people over thousands of years.



"Civilization is a brilliant, brain-meltingly wicked guide to life, the universe and everything"

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There were issues of **ST FORMAT** before this one - and jolly good they were too. Now's your chance to catch up



ISSUE 50

SEPTEMBER 1993
Disk: Civilization demo; Supercard database; Mega Depack; Runes
Inside: 50 inspiring ideas; Photo CD; 50 techie terms; Legends of Valour.



ISSUE 49

AUGUST 1993
Disk: POV Raytracer complete program and the Chaos Engine demo.
Inside: Discover the power of raytracing, and take a look at MultiTOS.



ISSUE 48

JULY 1993
Disk: B17 demo, the complete Prism Paint and Composer Two.
Inside: Make music on your ST, summer sports, review of DA's Vector.



ISSUE 47

JUNE 1993
Disk: Legends of Valour demo, three more games, DynaRAM, Picture Monitor.
Inside: Adventure games, upgrade your TOS, Xenomorph review.



ISSUE 46

MAY 1993
Disk: Biz Accounts demo, three games; Kubes, Rayoid, and Balls and two vector fonts.
Inside: Be productive with your ST, floppy drive roundup.



ISSUE 45

APRIL 1993
Disk: Nigel Mansell's Grand Prix, No Second Prize demos, Protext dictionary.
Inside: Get into programming, multi-player games, Protext masterclass.



ISSUE 44

MARCH 1993
Disk: 15 programs including Picture Concept, Grav 2, Insectroid and loads more!
Inside: Art on your ST, scanner roundup, the games for the '90s.



ISSUE 43

FEBRUARY 1993
Disk: Noddy's Playtime, Fractal Landscape, Animation Tool, Centipede.
Inside: Create animations, printer roundup, basic disk safety.



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JANUARY 1993
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ST/MAG/1093

INKJET PRINTER



Hewlett Packard now have more DJs than your local radio station. Peter Crush checks out their very latest release, the Deskjet 510

To produce printed text, desktop published documents or graphics on your ST, you should be using an inkjet printer. Hewlett Packard's ever-growing range of Deskjet printers are among the most popular because the company has such a good reputation for reliable machines.

The reasons for buying are even more convincing, because HP have now launched a new model that's even better and cheaper than its predecessors – and that's no mean feat. The Deskjet 510 is a mono machine including mechanical improvements like the sheetfeeder which can handle envelopes as well as four sizes of paper. Construction standards are up to the usual high level, and the printer comes with a confidence-

inspiring three year warranty. The new version is enhanced by the addition of two new built-in fonts, and the availability of new type sizes for the CG Times font. You have to pick your fonts using software control, this is possible with the more modern word processors like *Protext* or *That's Write*, although these can't access all fonts just yet.

Performance

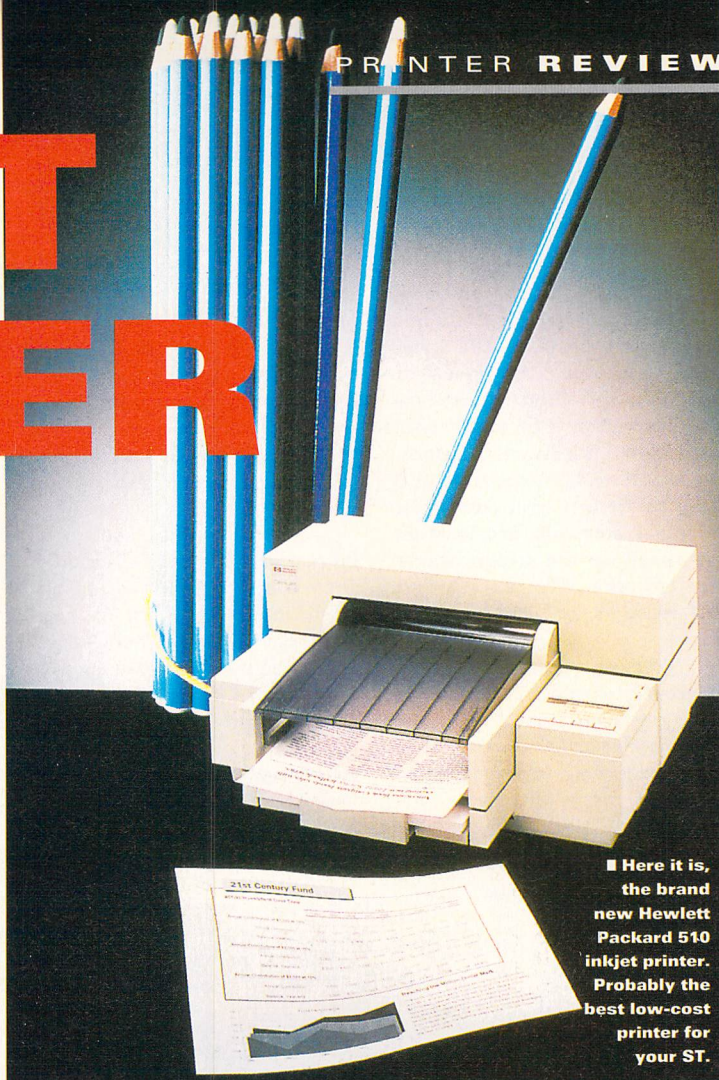
The new Deskjet works smoothly and quietly, and the print quality is very good. The printer takes both sizes of cartridge offered, the standard size and that of the new double capacity. The new range of fonts built into the printer is very useful, but only when there are some drivers to access them. You can switch on the Deskjet

510 without having to power up the printer before switching on your ST. The DJ510 is the best value Deskjet to date, and with a price tag of £329, you can't go wrong.

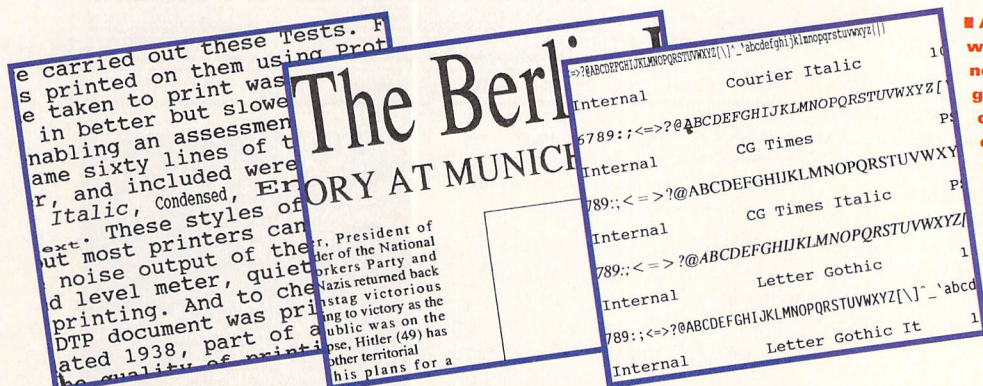
Out with the old

The DJ510 has just one standard parallel printer port instead of the usual two ports. Not that it really makes

much difference because you normally connect in the ST's parallel output port anyway. HP claim up to 40% faster printing of text, compared to the DJ500, although in our tests it didn't quite manage that. This might be because there are no specific ST printer drivers as yet for this model – it's just too new. However, using the standard Deskjet drivers in *Protext 5* and *PageStream 2*, respectable print times were obtained, and it is faster than the DJ500. Excellent stuff. **stf**



Here it is, the brand new Hewlett Packard 510 inkjet printer. Probably the best low-cost printer for your ST.



All these printouts were done on the new Deskjet, they all gave excellent print-out times and very clear good quality results. The print utility FPRINT speeds up output to HP deskjets and laserjets - it's PD and you can get it from the ST Club.

DeskJet 510 technical details

SIZE: The printer is 443mm wide, 206mm high by 389mm in depth, and weighs in at 6.6 kg. The power supply unit is an external transformer and it comes supplied complete with all the necessary leads and plugs.

FONTS: There are six built-in text fonts families, including Courier and Letter Gothic in a range of pitches, plus CG Times and Univers in proportional spacing. You can print the fonts in different heights, and they can also be expanded, underlined, printed in subscript and superscript, bold or italic.

MEDIA: Paper or transparency film within the weight range 60 to 135 gsm in US Letter, Legal and Executive plus A4 sizes can be handled, and a new envelope holder is built into the sheetfeeder tray, which holds up to 100 sheets of paper.

GENERAL: The printer responds to HP PCL level 3+ commands, shared with other Deskjet models and the HP Laserjet II, and therefore works with software supporting these printers. The machine can also be set to emulate an IBM Proprinter I via its DIP switches

Deskjet 510 printer

£329 Hewlett Packard
☎ 0344 369369

Highs

- Works with most ST software
- Excellent print quality
- Very affordable

Lows

- No hardware font selection
- No printer drivers.

What else?

- Canon BJ-10ex, £199, We Serve, ☎ 0705 647000.
- Star SJ-48, £199, We Serve, ☎ 0705 647000.
- Portable Deskjet, £528, Hewlett Packard, ☎ 0344 369369.
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NVDI 2.5

For most graphics-based uses the ST isn't amazingly fast, but this doesn't have to be the case. You can improve the speed of your ST by installing a hardware accelerator board or a software accelerator. Hardware accelerators are normally expensive and fiddly to fit into your machine, and most software accelerators only speed up the screen operations of the ST, accelerating GEM redraws and the scrolling of text.

NVDI (New Virtual Device Interface) literally replaces a major section of the operating system with optimised machine code routines in place of the original C routines held in ROM. This means that every time there is a VDI call, the new faster

routines are used, thus speeding up operations.

This latest version of the program is now compatible with all the 68000 range of processors right up to the 68030, so it works on the Falcon, enabling some software to run better on the Falcon than it normally would under TOS 4.

Setting up the program and installing it is practically effortless. There is a small installation program on the master disk which asks you to enter your disk serial number, your address and the drive you are going to boot NVDI from. Input the details and sit back while NVDI installs itself.

Running at speed

Once you have reset the system with NVDI running you find that you have a snazzy new Mac-like system font and you are able to run all GDOS applications, this is because NVDI has a version of GDOS built in. If you have any software that dislikes running

■ Using the Gem Bench ST testing program, we see the normal speed of an STE with TOS 2.06 installed...

Test	Time	Ratio
GEM Dialog Box:	7.330	99%
VDI Text:	12.625	100%
VDI Text effects:	6.280	100%
VDI Small Text:	11.685	100%
VDI graphics:	13.685	100%
GEM Window:	8.368	100%
Integer division:	2.395	100%
Float math:	3.680	100%
RAM Access:	2.025	100%
ROM Access:	1.368	99%
Blitting:	11.752	100%
VDI Scroll:	13.970	100%
GEM Font:	0.990	99%
VDI Enquire:	2.752	97%

Test	Time	Ratio
GEM Dialog Box:	2.335	53%
VDI Text:	8.875	1438%
VDI Text effects:	8.715	826%
VDI Small Text:	2.815	534%
VDI graphics:	2.500	543%
GEM Window:	5.875	220%
Integer division:	2.900	99%
Float math:	5.405	100%
RAM Access:	2.850	100%
ROM Access:	1.965	99%
Blitting:	1.585	220%
VDI Scroll:	2.100	663%
GEM Font:	0.800	80%
VDI Enquire:	1.455	185%

with GDOS, you can disable it from the NVDI Configuration Desk Accessory or CPX module. You find that the majority of software runs perfectly well with NVDI.

NVDI performs some marvellous speed increases on your system, with some functions accelerated by over 1,000%. Of course, not all VDI functions are accelerated by such a large figure but you should see at least a 200% increase in all functions, and the older your version of TOS then the bigger the improvement.

Overall, you can expect to see a significant improvement in the performance of your machine – word processors scroll faster, drawing programs and DTP packages update the screen faster and general Desktop screen updates are limited only by the speed at which your ST can access its drives. NVDI is a dream to install and a pleasure to use, when you disable it you wonder how you ever managed without it.

CLIVE PARKER

■ ... and here you can see the massive speed increases attainable with NVDI, with VDI text display a staggering 1,438% faster. To get a similar speed increase using a hardware accelerator would cost you £150.

NVDI 2.5

£49.95 from System Solutions, ☎ 0753 832212. All STs, TT and Falcon030, hard drive installable, 1MByte RAM recommended.

Highs

- Easy to install.
- Transparent in use.
- Can use as little as 65K of RAM.

Lows

- Clashes with a few programs.
- £50 is on the expensive side.

Competition

- Warp 9, £24.95 from the ST Club ☎ 0602 410241 although this is a screen accelerator rather than a VDI accelerator.
- There is a Falcon version under development.

85%
TESTING

VIEW 2

There aren't many programs you'd describe as necessities, but View 2 is one of them. It enables you to display text files, picture files, play sound samples and run animation files by clicking on them from the Desktop.

An impressive list of picture files can be displayed by View 2. All Degas, Tiny, Neochrome, Doodle and Spectrum 512 pictures can be displayed on-screen in any resolution using dithering techniques. It saves you messing about with several art packages just to look at a pictures in three different formats. There's no IMG or XIMG support in View 2, it would be a good idea to add these formats, along with GIF and TIFF file support. Other modules are planned.

Sample without searching

Being able to play sound samples is a useful addition to the program, you can check samples quickly to see what they are without searching for your sampling software, handy if you're not sure what the ENGINE1.SND sample sounds like. Cyber animations in .SEQ and .DLT

formats can be viewed by clicking on them. If you don't have enough RAM to load an entire animation, pressing <Alternate> when you click on the file plays it from disk.

View 2 enables .ARC and .LZH files to be listed and decompressed from the Desktop. The program simply runs the relevant archiver and tells it which files to decompress. This is probably the most useful function of all. They load and run as required when you click on a file to view. The utility is a suite of companion programs, each one performing a separate function.

A simple set-up

You don't have to worry about setting it all up correctly and installing View 2 on your boot disk, an installation program is provided to make the task an easy one. If you don't have a hard drive the installation program asks you to insert your normal boot disk, the View 2 programs are then copied to it – you need about 55K of space for the files. It's best to use the ViewBoot program to run View 2 from RAMdisk, otherwise the utilities

Installation & Configuration Editor © 1993

Written in GFA and Assembly by Damien M. Jones

Install from: C:\VIEW_2\ To: C:\VIEW_2\

View Pix Palette: ☒ ST ☒ STE ☒ Check ☒ F-S ☒ Sync-Fix

Form Feed after Print: ☒ Always ☒ File ☒ Never

View Snd Output: ☒ ST ☒ STE ☒ Cart ☒ 9.600 KHz

View ARC program: E:\ARCS\ARC\ARC.TTP

LZH program: E:\ARCS\ARC\LHARC.TTP

ViewBoot: ☒ Use It ☒ Drive C ☒ 41K ☒ Add Files ☒ Rm Files

■ View 2 cleverly installs itself from this dialog box, and, if you don't want to use the program, it can then cleverly un-install itself too.

load from floppy disk every time they are needed. After the installation is complete, test View 2 by double-clicking on a text file, instead of an alert box the file is displayed direct to the screen. You can still use the <Return> and Spacebar keys to scroll down through the text, but pressing <T> takes you to the start of the file and takes you to the end. The cursor arrows also scroll you through the text, and moving the mouse forward and back also scrolls the text. Pressing <Help> displays a full list of function keys.

View 2 is a small and useful utility and actually makes your ST easier to use. Brilliant.

CLIVE PARKER

View 2

£14.95 from the ST Club ☎ 0602 410241.

All STs, TTs and Falcon030. Hard drive installable.

Highs

- The most useful utility ever written.

Lows

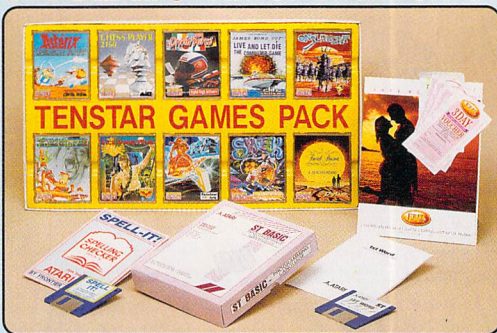
- Could support more picture formats.

Competition

- It's unique. There is nothing comparable to View 2 available. Separate PD and Shareware programs can offer some of the functions individually but there is no other unified viewer program.

83%
TESTING

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*1st Word not supplied with STs where Atari pack already includes 1st Word

WORTH NEARLY

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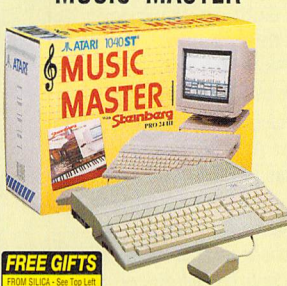
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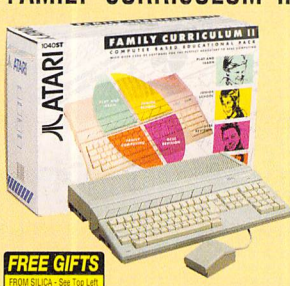
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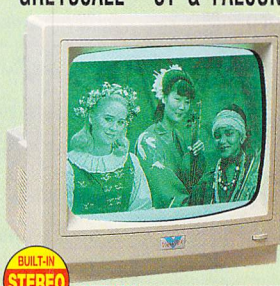
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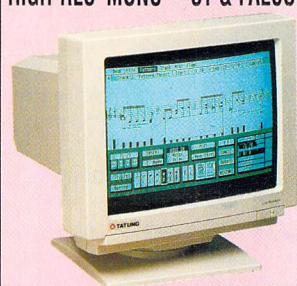
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NOTATOR



Notator Upgrade or Cubase clone... or neither? We sent Andy Curtis off to find out, armed with a very large dongle

Attention *Notator* owners everywhere, a new version of your beloved sequencing program has arrived. Or has it? *Notator Logic* bears the *Notator* name but it bears no real resemblance to the *Notator* program, as you know it. You could even be forgiven for thinking that Emagic have been taking a leaf out of Steinberg's book.

Notator Logic was actually written from scratch for the Mac and later converted for use on the ST. The result is a totally new program that has many "Mac-like" touches.

Notator Logic arrives in a large grey plastic case. The first job is to work out how to open it. Having solved that Chinese puzzle you notice a rather pleasant piece of hardware nestling alongside the substantial looking manual. The hardware turns out to be *Notator's* LOG 3 unit which has the dual functions of both hardware key and MIDI expander. As well as the main program disk there is also a disk of fonts and utilities. Installation couldn't be simpler, just copy the program disk in its entirety to a blank floppy or hard drive directory. Then insert your LOG 3 into the car-

tridge port on your ST and you are ready for action.

Loading from floppy drive takes quite a while as the program is over 650K long but *Notator Logic* runs quite happily this way. You are not forced to fork out for a hard drive in order to use this package.

The manual is well laid out and cross-referenced – giving an exhaustive description of the extensive fea-

"You notice a rather pleasant piece of hardware nestling alongside the substantial looking manual"

tures of the program. It would have been enhanced by adding a tutorial at the start to give people a taste of what is possible. The manual is an excellent reference volume but is not ideal for getting new users started. This issue really should have been



■ *Notator Logic* is here. It's packed with useful features and it comes in a large, friendly, plastic case. This time, *Notator* has a companion - the LOG 3 MIDI expander. Together, they are sequencing dynamite.

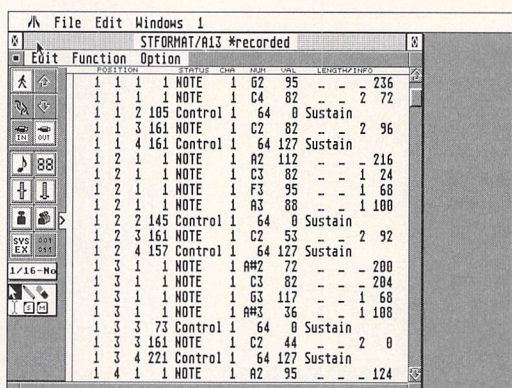
addressed, given that this program is so different from *Notator SL*.

In action

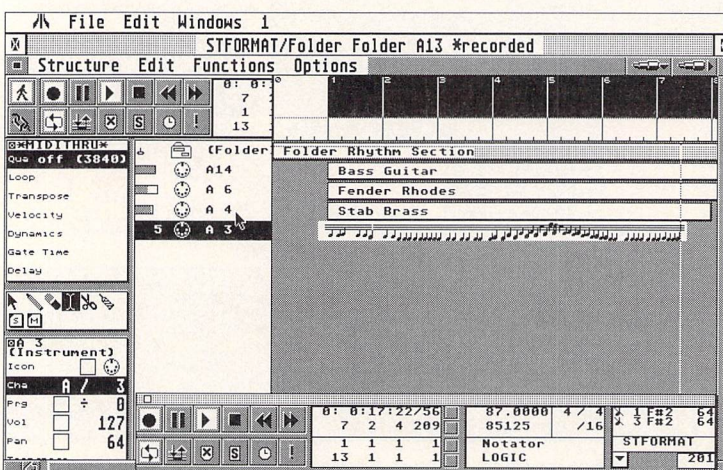
The whole *Notator Logic* environment is window and icon driven. Edit and arrange windows can be placed anywhere on the screen, and can be any size. The windows are, as far as possible, simultaneously active. This means that if you have a score edit window open it scrolls along as well as the

arrange window. You can try this with up to eight active windows but eventually the program begins to struggle a little. In fact, apart from the menu bar at the very top of the screen, there is no preset screen display format. As a user you really do control what is seen and even what scale it is in, thanks to a rather clever zoom feature.

The program has been crafted to place as few limitations on you as



■ The event list gives a complete list of MIDI events. Each event is fully editable. This kind of display makes it easy to spot unwanted controller information which has crept in. The usual vertical menu and mouse toolbox are there to help you in your endeavours.



■ The arrange window is probably where most of your songs originate. Horizontal bars represent your individual sequences and these can be nested in folders. You set up your instruments by assigning MIDI channels, names and icons. At the far left of the page there is a mouse toolkit which provides functions such as cut, paste, erase and text insert. It isn't the same as *Cubase's* arrange page. It's really quite different. Honest.

WHISTLE STOP TOUR

***Notator Logic* is not a new development of *Notator SL*. It is a completely new program – so don't be fooled by its "Upgrade" status.**

Runs happily from floppy drive. There is no need to rush out and buy a hard drive to run this new sequencing giant.

Superb multi-window environment enables up to eight windows to be

open at the same time and to be operated simultaneously.

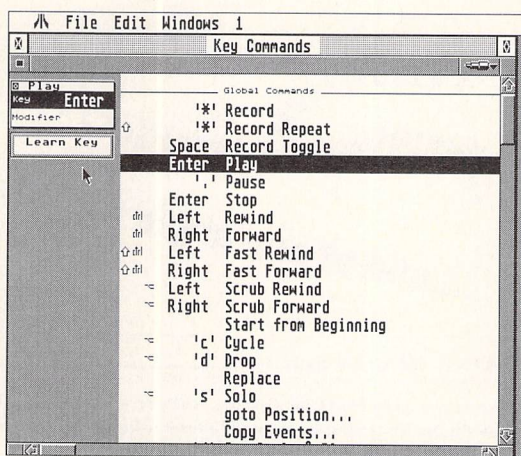
Notator is compatible with large screen monitors. The display is a lot less cluttered when viewed this way.

Most functions can be edited quite easily in real-time while the sequencer is running.

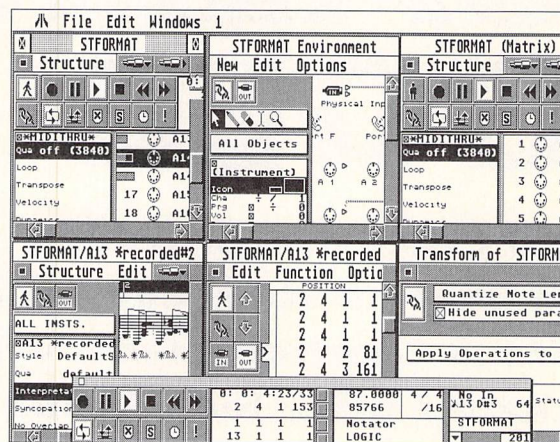
Keyboard shortcuts are user configurable. If you're used to a different system it's not a problem, you can

LOGIC

■ If only more software writers would let us change keyboard commands to something remotely sensible. *Notator Logic* enables you to do just that. This really makes fluency a lot quicker to achieve with a new program. Use the LEARN button and then simply hit the key you wish to assign.



■ The screen can look a bit messy if too many windows are open but they do all operate simultaneously. Use it to impress friends with your technical prowess.



possible. You can compose tunes in completely different styles from Classical to Rave with no difficulty whatsoever. For classical style pieces the score edit window is extremely useful. It is actually possible to use this facility to create a complete conductor's

score for an orchestra. There is provision made for you to enter song lyrics and many other specialist needs are catered for. Score printing is swift and most impressive.

Each window of the program brings with it a set of icons which

control the different functions available. Fortunately, a lot of the icons are the same in the different windows. It is fair to say that once you have mastered all the functions of these icons, you're a proficient *Notator Logic* user.

Icons are also used in the arrange window to indicate what type of instrument is playing in a sequence. Clicking the mouse button on the default icon brings up a long flip menu of alternatives. The choice is a bit bewildering, but essential if you want to keep your music well organised. All sequences with the same icon are automatically grouped together making editing a lot clearer. A double-click on any sequence opens the score edit window to show you the exact notation of the music.

Notator Logic's "Object Orientated MIDI Recording System" featuring "Hierarchical Arrangement" means that you can put multiple sequences in folders and then treat them as single sequences. While this is a great feature and beautifully programmed, it's unlikely that this idea is as new as it may appear to be. *Cubase's* "Group Tracks" have been around for some time now. The system in *Notator Logic* is, however, much more open-ended and is almost free of any restrictions.

The LOG 3 MIDI expander box (which also contains the KEY) presents a couple of problems. It seems you have no choice but to buy this piece of hardware with the program, regardless of whether you want to use a MIDI expander or not. As it contains the KEY we also have no choice but to use it. An expansion slot is available for plugging Unitor in if you already have it.

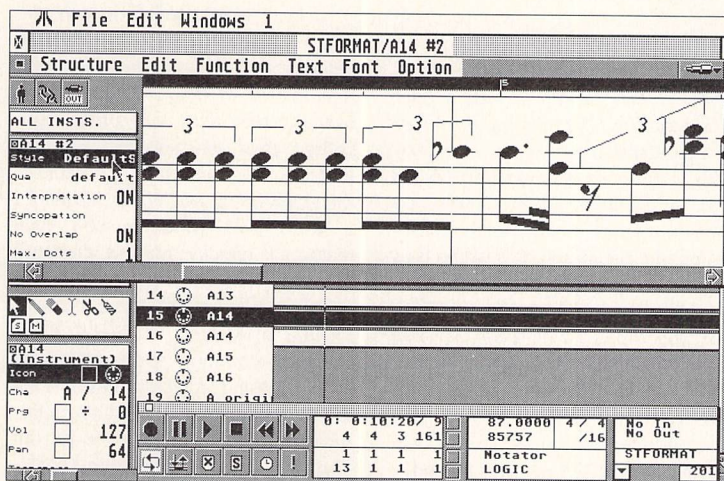
Verdict

Notator Logic is a fine MIDI sequencer, and it certainly can cater for you if you need a truly professional sequencing package. The features are well thought out and very well executed. The edit pages enable

you to change MIDI data in almost every conceivable way possible. The standard SM124 display can very easily get crowded if you try to have too many windows open at the same time. The score editing possibilities provide enormous potential for all aspiring classical musicians, composers and arrangers.

You may well be deceived by this program's "Upgrade" status. It really is nothing like *Notator SL* and it should have been given a new name to reflect this. The arrangement window is very reminiscent of the *Cubase* one, making comparisons between the two programs much easier.

Both of the market leaders now seem to be aiming very much in the same direction. It really is up to you to decide which program suits your needs best. **stf**



■ Score editing has always been the jewel in *Notator's* crown. *Notator Logic* has retained the same high standard and taken it further still. The multi-window environment means that you can have a score edit window open as well as an arrange window. As you record you see the notes appear in the score window. It is even possible to see staves from different sequences in the same window, thus building up a conductor's score of your music.

edit *Notator Logic's* controls so that your fingers don't have to re-learn too much.

Notator Logic is now compatible with accelerator cards.

The arrange window enables you to nest sequences in folders and treat them as single sequence "Objects."

Matrix edit is a piano roll style window. The notes scroll horizontally past a piano keyboard.

Timing accuracy is 960 pulses per quarter note.

The Hyper edit window shows almost any kind of MIDI data graphically for swift and accurate editing.

The environment page shows your MIDI setup graphically as a kind of virtual MIDI patchbay.

The LOG three key and MIDI expander unit gives you three extra MIDI output ports.

Notator Logic

£499 (£225 upgrade from *Notator SL* & £325 upgrade from *Notator Creator*) from Sound Technology ☎ 0462 480000. Works on all STs with at least 2MBytes of memory and a mono monitor.

Highs

- Multi-tasking windowed environment.
- Hierarchical folder handling.
- Superb score editing.

Lows

- Screen gets cluttered at times.
- No tutorial in the manual.
- Very expensive.

What else?

- The only real competition comes from *Cubase V3* by Steinberg.
- You can get a copy from Harman Audio ☎ 081 207 5050 for the princely sum of £499.

STANDARD
91

CALLIGRAPHER GOLD

Isn't the word processor market overburdened as it is? Frank Charlton checks whether there's space for this upgrade

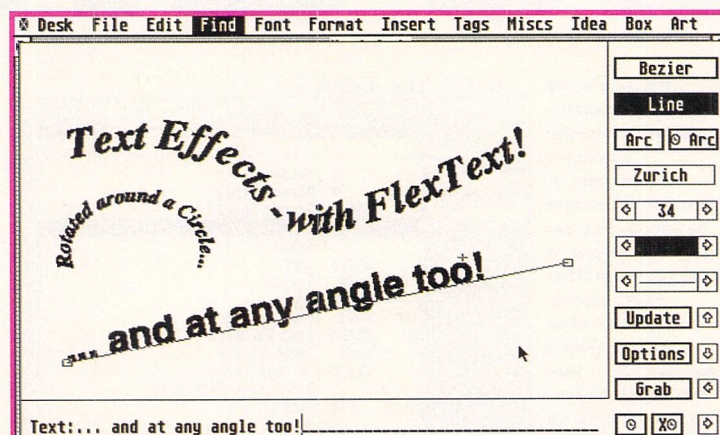
Word processors tend to fall into one of two categories; those which use your printer's inbuilt fonts, such as *Protext* from *STF Cover Disk 41*, or one of the graphic types with the ability to produce printouts in different font sizes independent of your printer type.

They're not all like that, though – what if you need to produce an attractive document using DTP-like features without wanting to delve into a complex package, but still need to be able to use the same program for everyday letters and the like? You certainly don't need the vast number of features provided by a program such as *Calamus*, and so a kind of "halfway house" between the conventional word processor and the full DTP suite evolved – the document processor, a

program which looks and runs like a word processor but contains powerful features more suited to a desktop publishing program.

Calligrapher Gold is the latest version of Working Title's document processor, providing DTP quality output without straining either your brain or your wallet. It isn't a fresh face on the ST scene – *Calligrapher* began life in the late '80s, although a number of setbacks with the original versions culminated in it being withdrawn for a while.

Calligrapher comes supplied on four floppy disks with a clear and readable 368 page ringbound manual, a quick reference card, a catalogue of extra fonts available, and a booklet relating to the "Gold" extensions to the program. Installing the



■ The impressive FlexText module enables you to fiddle with text 'til the cows come home, including some seasickness-inducing Bezier curve effects.

program to your hard drive is now much easier than with previous versions. A GEM-based installation program enables you to specify your ST setup, and prompts you for the master disks as it goes.

Professional feel

Calligrapher feels very close to some of the high-end word processors on the Mac. Documents are held in a standard GEM window with a ruler along the top. The ruler bar is the key to managing the style of your text, with features such as column widths and justification represented by miniature icons. Changing the justification of a paragraph or heading is as simple as double-clicking on the icon already there, whereupon a dialog box pops up containing the available icons and a brief explanation – click on the one you want and it drops into the ruler.

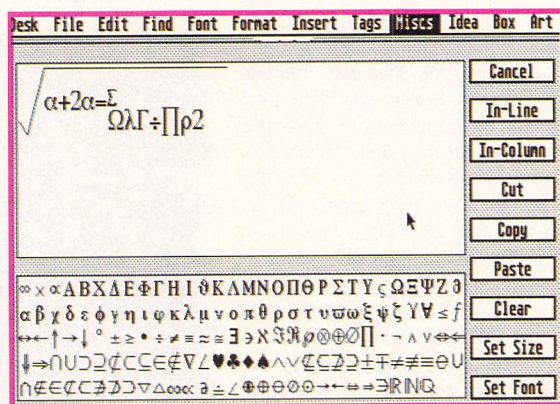
Adding something like a new column works the same way too – just double-click on the area of the ruler required and select the icon. Changing the style in mid-document is accomplished by selecting the "Insert Ruler" option from the menu bar, and a clone of the previously used style appears at the cursor posi-

tion so you can alter the settings to suit. By the time you've changed the style settings a few times the rulers start to clutter up your page, but they can be hidden from view using the main menu. Doing this makes it a lot easier on your eyes when you're checking the layout of your page.

Text manipulation is comprehensive. Selecting a block of text to alter the font size, or move or delete is a matter of dragging the mouse over the area until it becomes highlighted then selecting the required function. Another Mac-like feature is the ability to replace words. Highlight a word and whatever you type replaces it directly, making changing the odd word very easy. Even if you are a confident typist, there is bound to be a time when you make one of the most common errors ever, such as "thsi" instead of "this." *Calligrapher* has a practical solution – you just hit Control-X and the offending characters are swapped over.

Spell it right

A good spelling checker is a "must have" for any program claiming to be a serious word processor these days. The supplied dictionary recognises



■ *Calligrapher's Interactive Formula Editor* means you can produce that university thesis from your armchair, unfortunately ours caused Einstein to turn in his grave.

PAK UP YOUR TROUBLES

Calligrapher Gold's functions are extended with programs loaded when you need them, called Paks. So what do the ones which come ready supplied do then?

AUTOSAVE – Enables you to define an interval, after which your document is saved to disk automatically.

BARCODE – Creates a barcode for you from parameters which you

enter, from one of 14 industry standard barcodes, and even the type used to program some video recorders. This is then saved to disk as a GEM vector graphic and you can use it where you like. Probably.

FLEXTEXT – Enables you to bend pieces of text in your chosen font and style around arcs, lines and Bezier curves, which are then saved as GEM files and pasted into your document. Useful for eye-catching headlines and unusual effects.

FORMULA – The thought of playing with these all day is the mathematician's dream, in theory, at least. This function enables you to enter formulae easily from the keyboard or by clicking on buttons.

GRAMMAR CHECKER – Compares your text against a set of 3,000 rules covering a wide range of grammatical, punctuation and style checks. It won't replace careful writing, but it can spot common errors such as using "their" instead of "there."

HYPHENATE – Enables you to specify exactly how you want your text hyphenated, if you do at all. Select a word, paragraph or the whole document to be automatically hyphenated for you.

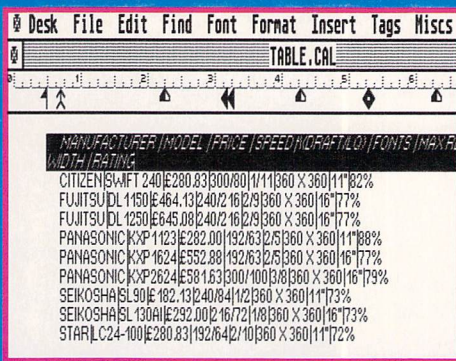
IMPORT DEGAS/NEO – Converts any resolution *Degas* or *Neochrome* picture into a mono IMG file using dithering techniques.

IMPORT/EXPORT – Enables you to load text in ASCII, DIF, 1st Word Plus,

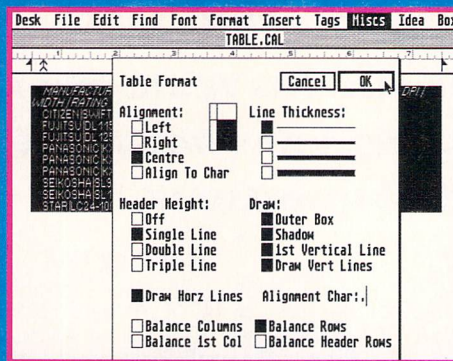


Tables to eat your dinner off and tables to teach you maths

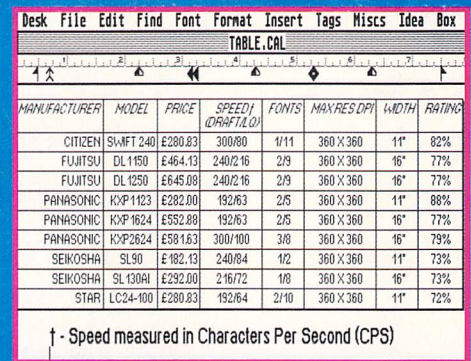
And then, of course, there's Calligrapher's table facility. This is how it works



■ Each column in a table is separated with a "I", with each row on a new line. Here we have highlighted the table header with italics.



■ Highlight the text to turn into a table, and the dialog box enables you choose just how you would like it to look.



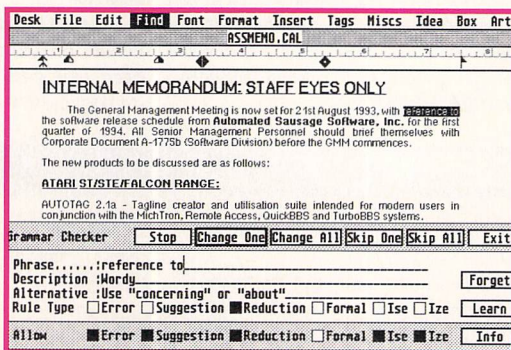
■ Click on OK and a finished table is pasted into your document, saving hours of fiddling. You can convert it back to text easily for further changes.

over 160,000 words, and when it does stumble over an unrecognisable word, the spellchecker hunts through its dictionary to offer you a list of alternative spellings. The dictionary is intelligent enough to spot mis-keyed words and transposed letters and not blame you for being ignorant – just a crap typist. Adding words to the list is done by clicking on "learn," which updates a separate user dictionary held on disk.

Importing and using graphics in your document has come to be the norm rather than the exception now, especially in document processors like this. *Calligrapher* gives direct support for IMG bitmap and GEM vector files requiring conversion using the supplied "Import Degas/NEO" extension.

The Pak handles colour images very well, with a range of dithering

■ The Grammar Checker spots common mistakes which include mis-keyed and transposed words and offers you alternatives.



Redacteur and RTF formats, and exports ASCII and RTF (Microsoft Rich Text Format, as used on the Mac and the PC).

INDEXER – Manages and generates an index that's based on "handles." These are linked to words in your text, and pasted as an index into your document.

KEY SELECTOR – A pop-up box containing those characters you can't easily reach from the keyboard. One

and re-sizing options before saving the finished IMG to disk. Pictures are defined as "Inline" or "Column-Wide." Inline imports the picture at the cursor position while preserving its aspect ratio, and the Column-Wide option rescales the graphic to fit the width of the current column.

Calligrapher falls a little short of a fully-fledged DTP package since the graphics and text can't be positioned side by side in the same column. After an image has been imported, the text cursor appears below it ready for you to put some text in. If you want to have text to the side of the picture you have to open a new column. A set of drawing tools is also provided in the main program for lines, boxes, circles, but they're no substitute for a good drawing package.

click and the chosen symbol is pasted into your text.

LABEL – Manages the printing of all sorts of labels.

SERIAL NUMBER – Creates different serial numbers along a set pattern.

THESAURUS – An instant reference guide to the alternative and opposite meaning for the word of your choice. Highly flexible, and a writer's best friend.

What's Gold about it, then?

The Gold version is basically *Calligrapher Professional* (£74.99) with some of the Paks. The Pro version doesn't come with the **Barcoder**, **Formula Editor**, **FlexText**, **Labeller**, **Autosave**, **Indexer** and **Grammar Checker** modules, although you can buy them separately from Working Title.

Presentation

When you're presenting a document with a large piece of data in, such as from an imported spreadsheet file, it's often better to display the information in table form. *Calligrapher* has a powerful table-making tool built-in – simply separate each field in the data with the "I" character, highlight the block of data, and *Calligrapher* creates an attractive table for you without the usual effort involved.

Calligrapher uses a system of outline fonts, and comes supplied with the Zurich and Holland families, basic clones of Times and Helvetica faces, and Unitype, a typewriter style face. The outline system means that any point size can be used, from six to 128 point, without loss of definition caused by rescaling bitmaps.

The printed output produced is very clean and crisp, and the printing options are fully controllable, including a comprehensive mail-merge facility. A wide range of drivers is supplied from 9-pin up to Inkjets and the Atari laser, and two different ones can be installed at once. The snag with *Calligrapher*'s outline fonts is that they use yet another standard, and at the minute the only extra fonts available are from Working Title.

Calligrapher does fall down in certain areas, however. The screen refresh rate is painfully slow at times, especially when scrolling through a large document. On a 16MHz STE running a screen accelerator is better, but still not terribly speedy.

The non-standard outline font system means you can't create or adapt your own, so PD fonts aren't

likely to appear. *Calligrapher* is easy to use even if you're a beginner, and the future-proof Pak system means the authors can add new features as they are needed.

The powerful extras like the Grammar Checker, Formula Editor and FlexText modules are unlike anything else on the ST scene, and give *Calligrapher* a well deserved place in an already crowded market. **stf**

Calligrapher Gold

£105.99

Working Title

☎ 0865 370 175

Highs

- Easy to install and use.
- Excellent printout quality.
- Some very powerful features with the Paks supplied.

Lows

- Screen display can be slow.
- Yet another outline font standard.

What Else?

- WordFlair 2, £99.99, HiSoft ☎ 0525 718181.
- Similar "document processor" but lacks *Calligrapher*'s range.
- That's Write 2, £129.100 Compo ☎ 0480 891819.
- Superb graphic font word processor, but without many of *Calligrapher*'s extras.



ST ANSWERS

It's time for Clive Parker and his team of experts to dive into the mailbag, and answer more of your ST and Falcon related questions

THE STF ADDRESS

Send all your ST related problems to ST Answers, ST FORMAT, 30 Monmouth Street, Bath BA1 2BW. Please indicate the type of problem on the envelope.

BEGINNERS



If you have bought your ST recently and you're not quite sure about which bit goes where, you need help.

COMMS



Communication is the buzz word for the '90s and is becoming a buzz word for ST Answers. Check it out here.

DISKS



Floppy disks spin at incredibly high speeds, so something's bound to go wrong with them at some stage.

GAMES



If cheating at games is your thing (tut, tut) you're better off turning to page 46 for Gamebusters.

GRAPHICS



Having a few problems with your graphics package? And you're not quite sure where to turn to. Well, look no further.

HARD DRIVES



It's hard, very fast and can store a hell of a lot of data. Sometimes though, it causes unsolicited errors.

PRINTERS



Using a printer is the easiest thing in the world... until your paper gets chewed and big black blobs start appearing.

PROGRAMMING



Whatever language you use, at ST FORMAT we have the experts to tackle your particular programming nightmare.

SOUND



You're lost in music, no turning back... and all that Sister Sledge stuff. Look for this logo if you're into sounds.

ST PROBLEMS



If you're not quite sure what your looking for, or not quite sure what your problem is, look out for this logo.

Icons for all



You can use the 100 TOS 2 icons that were

on ST FORMAT Cover Disk 48, even if you don't have TOS 2.06 installed in your machine.



To do this you need a replacement PD Desktop called Teradesk from the ST Club ☎ 0602 410241 disk UTI.205, it only costs £1.45. First make a backup of your Teradesk disk and leave the backup write-enabled. When you have decompressed the TOS2ICON.TOS file from the Cover Disk, copy the DESKICON.RSC file to your Teradesk backup disk. In one of the folders on the Teradesk disk you can see there's a file called ICONS.RSC, rename this to ICONS.RSX.

Now change the filename of DESKICON.RSC to ICONS.RSC and copy it into the same folder as ICONS.RSX. Reboot the system and run the Teradesk DESKTOP.PRg and you can now use the Cover Disk icons with Teradesk. You have to reassign the data file icons first because they all appear as trash cans to begin with.

Adam Dugmore, Coventry

Emulating PCs



If I bought a Falcon with a hard drive and a 386sx PC emulator, would I be able to play VGA games on a VGA monitor? Surely the speed and power of the Falcon would make this possible.

Ian Hunter, Newcastle-upon-Tyne

stf: It is unlikely that PC games can run on the Falcon even with a PC emulator. The Falcon would have to emulate one of the various PC sound cards for a start – most games enable you to select between Roland, AdLib and SoundBlaster cards. Emulators are not designed for game playing, but for running serious applications.

The only PC emulator that's available for the Falcon at the moment is the Falcon Speed 286 which runs in 16 colour 640 x 480 VGA mode – this is fine for a word processor or spreadsheet but it is not what you are after.

We spoke to Compo Software who developed the Falcon Speed 286 and they confirmed that PC games do not work with the Falcon Speed and were never intended to. The Falcon Speed emulator costs £229 and you can get it direct from Compo Software on ☎ 0480 891819.



■ Llamazap, as well as being the latest Jeff Minter game, also has the dubious distinction of being the only game that uses the controller that goes in the analog joystick ports.

Analog sticks



I have noticed that I've got analog joystick ports on my STE. Can you tell me where I can get an analog joystick and what games work with it?

Gareth Wilsdon Tagg, London N1

stf: The new game controllers for the Falcon are compatible with the STE analog joystick ports and the Jaguar's joystick ports. You can get them for £29.99 from Atari on ☎ 0753 533344. The only game that has been completed and is on sale that enables you to use the controller is the new Jeff Minter shoot-'em-up, Llamazap. Check out our review on page 66.

That's the positive news – but on the bad side so far there haven't been any games written to use the analog joystick ports on the STE.



GFA SURGERY

Any GFA Basic problems? Find the answers here with Mac Marsden

Shell out or not?

I have been using GFA Basic (Interpreter, Linker and Compiler) for some time now and I am considering adding Gshell to complement the system. Is it worth adding and if so what are the advantages?

R Marriott, Halifax

stf: The Gshell (from GFA Data Media UK, £15, ☎ 0734 794941) program certainly does enhance the GFA suite of programs. The extra facilities enable you to program more easily, making the programming environment easy and slick to use. You have an initial main menu screen where the menu is split into two sections. The top section is for setting up your Compiler – Linker settings

and your final output program type either PRG, TTP, ACC.

The bottom section of the menu is for either accessing other in-built Accessories or to begin compiling and linking your program from a selection of different options.

The "Where it's at and what's it got" of Gshell

1. Enables you to set up a path so that when you enter the Interpreter, the program you are currently working on is loaded automatically.
2. There is on-line help available.
3. Enables you to edit Compiler, Linker, Gshell settings.
4. Enables you to set up function keys, so that you can run another program from within the shell.
5. Enables you to access Desk Accessories from programs.
6. Enables you to customise the shell so it operates as you want it.

7. You can run your Compiled and Linked programs without having to leave Gshell.

Totally terrific programs

Is it possible to run a .TTP program from within GFA Basic? If so, can you tell me how you're supposed to send command instructions to it?

John Wright, Tyne and Wear

stf: You'll be pleased to know that it certainly is possible to run a .TTP program from within GFA Basic – the following listing should put you on the right track.

```
[1] COMMAND$=COM$+DESTIN$+" "
"+SOURCE$
[2] RESERVE xxxxx
[3] A%=EXEC (0, SYS$, "
COMMAND$, "")
[4] RESERVE
```

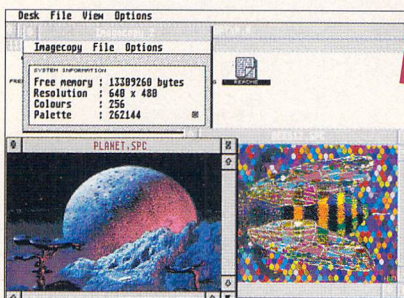

Hard RAM drive?

I am thinking of upgrading my STE to 4MBytes. Could I create a 3MByte RAMdisk, install hard drive software to it and then launch the program from the RAMdisk? I am thinking of games like Civilization which fit into 3MBytes without problems. Could my RAMdisk programs permit such large virtual disks?

S Hilson, Bristol

stf: All RAMdisk programs should enable you to create a 3MByte RAMdisk – the M-Disk program that was on the Cover Disk of STF 44 certainly can.

All you have to do is follow the normal hard drive installation process and then enter the RAMdisk drive letter when asked for the hard drive partition you wish to install to. Copy the contents of the RAMdisk to floppy disks when the installation is complete and all you have to do is copy the disks back to the RAMdisk whenever you want to play.



■ See these delightful pictures here on-screen? They are the hacked and much reprinted 512 colour pictures supplied with Spectrum 512, although they've not been seen on the Falcon before. Imagecopy Colour 2 from the ST Club is the answer to all your colour printing problems, whatever your printer. So get it.

Where: [1] `COMMAND$` holds the commands to be executed by the program, `COM$` holds the instructions to be carried out, `**ad` and so on, `DESTIN$` holds the destination name of the file, including the directory and any folders (either `e:\path\`), and `SOURCE$` holds the source program name (parameters as `DESTIN$`).

[2] Always remember to reserve enough memory to enable the application to work in (`xxxxx` is the amount of memory required).

[3] This line loads in the .TTP program, where `SYSS$` holds the program path and name (`C:\APP.TTP`).

[4] Unreserves allocated memory and also enables your program to continue to operate.

First, be careful on the length of the input command (`COMMAND$`) string as TTP applications have limited input buffers and if the line is too long it is cut causing an error when it tries to do

something. Second, make sure that you know the TTP commands for the particular application you are using, since they all do not use the same control characters.

Finally, ensure that if any of your paths are within folders, make sure that the final backslash is included, that is `e:\pathname\`, funny things happen if this is omitted.

Inline plus

I have been following your articles on the `INLINE` instruction with great interest, but what can I do if the block of code you wish to include in your program, is greater than 32,000 bytes long?

Bob Golden, Durham

stf: The command which enables you to include more than 32K of code within your program is `MALLOC()`. This instruction is very useful if your program

Stereo STFM?

I have been told by a friend that it is possible to get stereo sound out of the STFM's monitor port. Can you give me the circuit diagram so that I can make up a lead?

James Canfer, Wilts

stf: Sorry to disappoint you, James, but your friend is wrong. The monitor port on all STs only has a single audio out connection. STEs, Mega STEs and the

Falcon have separate stereo outputs for connection to stereo monitors or hi-fi systems. Below you can see the connections that enable you to connect your STFM sound to your hi-fi.

Maplins part numbers.

13-Pin DIN plug

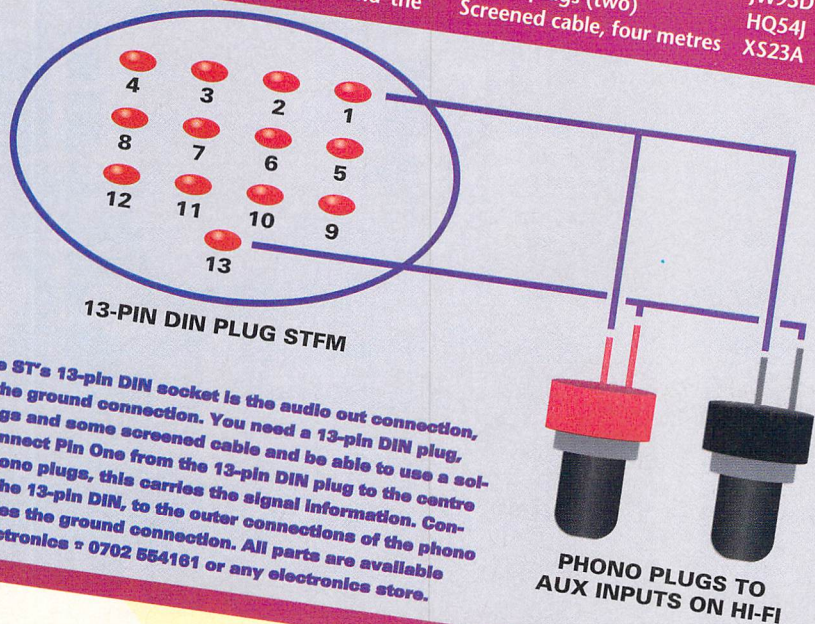
Phono plugs (two)

Screened cable, four metres

JW95D £1.70

HQ54J 21p each

XS23A 38p per metre



13-PIN DIN PLUG STFM

Pin One on the ST's 13-pin DIN socket is the audio out connection, and Pin 13 is the ground connection. You need a 13-pin DIN plug, two phono plugs and some screened cable and be able to use a soldering iron. Connect Pin One from the 13-pin DIN plug to the centre pins of both phono plugs, this carries the signal information. Connect Pin 13, of the 13-pin DIN, to the outer connections of the phono plugs, this carries the ground connection. All parts are available from Maplin Electronics ☎ 0702 554161 or any electronics store.

PHONO PLUGS TO AUX INPUTS ON HI-FI

Glad to be of service

I have an HP Deskjet 500C and many SPU files from the Rombo Complete Colour Solution, but I find I cannot print out my picture files.

A Addington, Sleaford, Lincs

stf: Imagecopy Colour 2 ((STF Rating: 91%) enables you to print out all your SPU pictures. It costs £19.95 from the ST Club and is well worth it.

Non-comm

I am having problems using my Case 400/22bis modem with my Falcon. I have a PC 9-pin D to 25-pin D modem lead but all I get is garbage. All the internal test programs say that the modem is working OK and I have checked all the software settings of my Falcon. Is the problem the modem, the software or the lead?

Martin Bishop, Newcastle

stf: First of all make sure you are setting your comms software to the right settings – you seem to imply that you're setting the the CPX rather than the software.

Double check your software settings and get a friend to try the modem on another machine just to check whether or not the problem is with the modem.

uses more than one 32K picture and possible sound samples, and yet you wish only to have a single block of code.

The drawback is that, unlike `INLINE` you have to load in the code with the command `BLOAD "PATHNAME\FILENAME.EXT",ADR%` every time you load the program. The best way of using this function is to decide what codes you wish to include and then load them into memory back to back, then save the code as one block, so that on loading you only have one block of code to load in. For example if we had two Degas pictures to include it would look like this:

```
[1] RESERVE XXXX
[2] ADR%=MALLOC(YYYY)
[3] BLOAD "E:\PATHNAME\FILENAM0.PI?",ADR%
[4] BLOAD "E:\PATHNAME\FILENAM1.PI?",ADR%+32066
[5] BSAVE "NEW_PATHNAME\
```

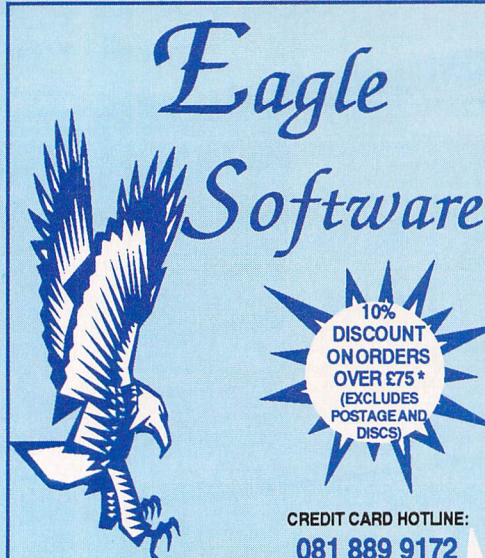
`NEW_CODENAME.EXT",ADR%+64132`

[1] Reserves memory for your program to run in. [XXXX – size of your program in bytes. [2] Sets up the address in memory where the code is placed, where (YYYY) in our case would be 64,132. We do not need to know the address of ADR%, we just have to be able to use it. [3 and 4] Loads in our two picture files. [5] Saves our new 64,132K file to disk.

Now to load it back in you have to delete lines 3 and 4, then alter line 5 to

```
BLOAD"NEW_PATHNAME\NEW_CODENAME.EXT",ADR%.
```

To use the files we know that picture one is held at location ADR%, and that picture two is at location ADR%+32066. The picture is an example but it could be anything. To clear the memory address you need to use `MFREE(ADR%)`.



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Enough RAM?



Is 1MByte of RAM enough to play games like *Civilization* and *Railroad Tycoon* or do I need to get an upgrade? My STFM's 1MByte seems paltry in comparison to the RAM in my PC at work.

David Ankara, Norwich

stf: 1MByte is the maximum required by any ST game to date and it is very unlikely that any new games will require any more than this.

Remember that all PCs have special memory page switching systems to access extended and expanded memory because of their inherent design limitations. Most applications that use 1MByte on the ST normally require at least 4MBytes for the PC equivalent because of this.

Why so expensive?



I am thinking of getting a hard drive for my system but I am put off by the £400 plus price tag of ST hard drives. Can you tell me why they are so expensive?

William Campagne, Derby

stf: Initially ST hard drives were expensive because the ST has a non-standard hard drive interface and extra hardware was required to access hard drive mechanisms.

Prices have now dropped to a rather more affordable level, you can now get 200MByte hard drives for around £400 – try the ICD FA-ST 170DC drive from First Computer Centre ☎ 0532 319444 for £399.99 or a 50MByte drive from Gasteiner ☎ 081 365 1151 for £289.

Mandala and Sebra



Despite what Oliver Broadway says in his document file for *Mandala* you can run the program using the *Sebra* mono emulator from ST FORMAT Cover Disk 40, and very pretty it is too.

M Waterhouse, Bedford

Shall I upgrade my TOS?



I have a six year old STFM, should I get a TOS upgrade? I am thinking of getting a hard drive but I am not sure if my version of TOS is suitable.

Steven Gumby, Essex

stf: If you are going to use a hard drive then you should be using at least v1.4 of TOS in your ST, older versions sometimes have problems with hard drives.

The only STFM compatible TOS upgrade board available at the



ASSEMBLY POINTERS

You want to program brilliant speedy machine code fast games for your ST? Then you might need the helping hand of Tony Wagstaff

Chain of command

I want to write a .TTP, or Tos Takes Parameters application. I know the parameter is passed in the base page, but could you tell me what the base page is?

John Wright, Brighton

stf: The base page is an area of memory that occupies the 100 hex bytes below the start of a program, and is set up when that program is executed. It contains the sizes of the various sections of a program, text, BSS, and data, as well as the command string.

The address of the start of the base page can be found four bytes into the stack, 4(a7), when your program begins its execution. You're most likely to use it if you want to return memory using the *Gemdos Mshrink* call, as the *initialise_program* routine used in our recent assembly tutorial does – see page 50 to order your back issues if you've missed the series.

The command string itself starts 80 hex bytes above the start of the base page. The first byte is zeroed if no parameter is passed, non zero otherwise, with the string itself running from base page+\$81. The string is null-terminated, so test for a zero byte to find the end.

Don't forget that with TOS 2.06 and above, or a replacement Desktops such as Neodesk, you can pass parameters by dragging a file icon onto any type of program icon, not just a TTP.

moment is the T-Board 68, it costs £69.99 from Compo Software on ☎ 0480 891819.

Street fighting too



I bought *Street Fighter 2* and then found that I needed 1MByte of memory to run it. I have a 520 STFM and I thought it would be cheaper to install the board myself, but when I opened the machine I found that the SIMM board was stuck in with glue! I took it to an

Wait for it

How do I wait for a key press or mouse button click? I've tried *evnt_multi* but I don't understand how it works.

Brian Shane, Inverness

stf: The assembly tutorial in STF 48 explained how you should set up the AES to use *evnt_multi*. See page 50 if you missed it. For button and key events, the first parameter placed in the first word of *int_in* needs bits 0 and 1 set, *evnt_multi* then knows that you are waiting for keyboard and mouse button events.

Int_in+2 holds the number of clicks to wait for, while the value placed in *int_in+4* tells the AES which mouse button we are interested in. Bit nought is set for the left button, bit one for the right, and obviously both nought and one for both buttons.

Int_in+6 relays the state of the buttons we are waiting for. Using the same bits as for *int_in+4*, a value of 1 waits for the button down, and 0 waits for the button up, so that binary 11 indicates you are waiting for both buttons down.

Printing register

How do I print the contents of a data or address register to the screen?

Matthew Weivel, Dorset

stf: First of all the register's contents have to be converted to hexadecimal ASCII. Since each hex digit is four bits, or a nibble long, we need to use shifts to access each byte in turn, and further shifts to access each nibble. See the listing below for more details.

```
move.w #4-1,d3
next_byte bsr to_hex
asr.l #8,d0
dbra d3,next_byte
clr.b reg_string+8
bsr print_routine
```

```
to_hex
move.l d0,-(sp)
move.b d0,d1
lsr.b #4,d0
cmpi.b #9,d0
bls.s not_A_F
addq.b #7,d0
```

```
not_A_F add.b #$30,d0
```

```
and.b #$0f,d1
cmp.b #9,d1
bls.s d1not_A_F
addq.b #7,d1
```

```
d1not_A_F add.b #$30,d1
asl.w #8,d0
add.b d1,d0
move.l #-1,d4
move.w d3,d4
asl.w #1,d4
move.l #reg_string,a3
move.w d0,(a3,d4.w)
move.l (sp)+,d0
rts
```

```
BSS
even
```

```
reg_string ds.b 9
```

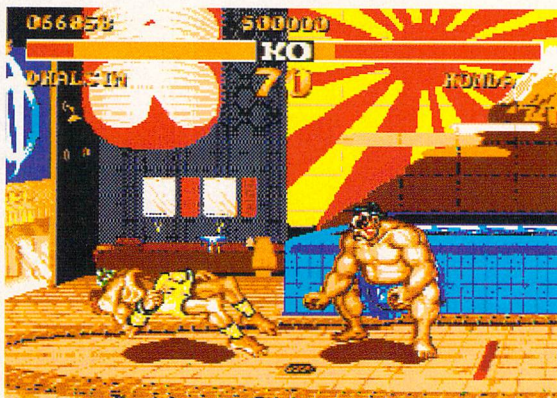
When you reach your *print_routine*, you'll find that *reg_string* will contain d0's content in ASCII format, ready to be printed using the *Gemdos Cconws* call. Simple when you know how, isn't it?

MMU chip rather than the more common square chip. Marpet Developments ☎ 0423 712600 can upgrade any ST to 1MByte, although there is a fitting charge depending on the difficulty of the upgrade. Call them with accurate details of your machine so they can offer you specific advice.

Selling your machine and getting a new 1MByte STE would be one solution, but a bit drastic. You're not going to get a very good price for an old, 512K STFM because they do not have a very high second-hand value. The only way to increase the value of the sale would be to bundle a lot of games with it, at least 50 if you want to get anywhere near £200. Remember that you can get brand new STFMs for just £159.

The final part of your problem concerns your TOS version. *Street Fighter 2* only runs on machines with TOS 1.4 or above, this would not include your machine.

However, US Gold send fixed versions of the game for older TOS versions if you send them a letter and your master disks. US Gold are at Unit 2 & 3 Holford Way, Holford, Birmingham B6 7AX.



Yes, you too can be fighting large hairy men in the streets simply by getting your old master disks replaced with shiny new compatible ones. Don't worry if you've only just bought *Street Fighter 2* all copies on-sale are fixed for old TOS versions.

Cover Disk problem

 I use my Falcon for music with Notator Logic. My problem is with the Cover Disk, only Prism Paint and the sequencer work. Is this a problem with my machine or is it the Cover Disk software itself?

Fryderyk Babinski, Poland

stf: Because of the radical differences in the new version of TOS for the Falcon, many ST programs do not run, particularly PD or Shareware software, and the software on our Cover Disk is designed for use on the ST. You can see that we're now indicating whether Cover Disk software is Falcon compatible in the Disk pages.

Cache and carry

 If you wish to disable the Falcon cache then you have to edit the NEWDESK.INF file in a text editor and change some of the settings as described below. You can also enable overscan mode to give your Falcon a larger screen area.

TOS 4.00
Change the line:
#E F8 03 00 06 01 2A 00 00 00 00
to
#E F8 05 00 06 01 2A 00 00 00 00
to enable overscan mode
or
#E F8 03 00 04 01 2A 00 00 00 00
to disable the cache

TOS 4.01
Change the line:
#E F8 03 00 06
to

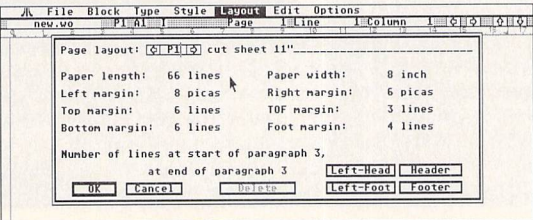
#E F8 07 00 06
to enable overscan mode
or
#E F8 03 00 04
to disable the cache
TOS 4.02
Change the following line:
#E 18 02 00 06 00 2B 00 00 00 00
to
#E 18 05 00 06 00 2B 00 00 00 00
to enable overscan mode
or
#E 18 02 00 04 00 2B 00 00 00 00
if you want to disable the cache
Peter Joustra, Holland

stf: Thanks for that, Peter.

Length problems

 I have been having a few problems with setting the page length in Write On. I am unable to set the page length in lines, only in inches. Do you know if there is any way to set the page length in lines since that's a bit more convenient?

Glynn Trow, Hants



■ It's easy when you know how (and have a manual handy). Clicking on the bits and bobs of the page layout dialog box enables everything to be configured down to the last pic.



STOS CORNER

Got a hassle with STOS? Then send in your probs to Billy Allan who can sort them out for you, no hassle

Printer printing

Is there a way to print a document from disk to the printer from STOS, without using the TRAP command?

Graham Third, Kilbirnie

stf: The easiest way is to use the OPEN command to open a channel to the printer port, then just PRINT the text to that channel. This listing shows how to do it.

```
10 F$=file select$("*.**","Load.
a doc to print",4)
20 if F$="" then default : end
```

```
30 open in #1,F$ :_
open #2,"prt"
40 repeat
50 line input #1,A$ :_
print #2,A$
60 until eof(#1)
70 close #2 : close #1
80 goto 10
```

Follow the leader

I have seen some demos which feature screens where a line of sprites appears to follow the sprite at the head of the line.

Can you tell me if there is a quick way to do this from STOS because I want to include this effect in a game I'm writing?

James Scott, Hastings

Odd Atari

 I have switched to the STE from the PC and I am keen to find out where the PC-style ST, pictured in issue 48, came from. Although I like the ST I do miss the separate keyboard and base unit style of the PC.

Geoff Eklund, Notts

stf: The ST featured in the picture is the Mega ST, which is no longer manufactured. Atari later released a newer two part machine which is called the Mega STE, also no longer available, but you may be able to get a discounted machine if you shop around.

The only other alternative is to re-house your ST in a new case. The company to contact is System Solutions, they supply tower cases for all the different STs enabling all sorts of add-ons like hard drives, extra floppy drives and tape streamers to be mounted in the main case with a separate keyboard. The Lighthouse Tower

What isn't so obvious is that you can also edit the method of measurement. If you click on the word "inch" in the line "Paper length: 11 inch" it changes so that it reads "lines," click there again and you can see it changes from "lines" to "cm." All of the measurements can be customised and then stored by using the Save Layout option.



MUSIC AND MIDI

Need something sorting with the world of sounds? Andy Curtis is your man

One foot in the stave

I have used different sequencer programs on my STE with a score edit feature. When I try to use this feature there is an awful mess of notes on it which doesn't resemble my music at all. Can you please suggest how I can get the score editor to list my music properly instead of just giving me all this trash?

Chuck Murphy, USA

stf: It is important that, before score edit is used, you hard quantise the music to be edited. This is because your performance can never be completely perfect! The "mess of notes" you are seeing is actually exactly what you played into the sequencer. By using the quantise fea-

ture you correct notes to the nearest selected measure. Now when you enter score edit, things should look rather more clear.

You may be able to enhance the display further without affecting the music by using a display quantise feature. This simplifies the music score further still and makes it easier to read. If you fiddle around with all these procedures you should be able to get the results you want.

Quadraphonic ST?

I have been using a Soundtracker program on my ST for over six months and it seems as if it's got four sound channels. If this is so, why are there only two outputs on the back of my ST for sound?

Shouldn't there be four to cover each sound channel? At present, it

seems as if two channels are coming out of each output.

Malcolm Herrington, Guildford

stf: A standard stereo hi-fi system has only two channels, the left channel and the right channel, as does your STE. No matter how many channels are represented on-screen via your software there are still only two actual sound output channels. Even in a large recording studio where there are dozens of channels, each one is always mixed into a two channel stereo output. Your STE is no different in this respect.

Natural progression

I use a Korg SQD1 hardware sequencer. My problem is that I want to save my songs as MIDI files. I have access to a 1040STE and have tried to send information from the SQD1 into Sequencer One, but it doesn't work. Is

it possible to do the above? If not, are there any sequencing packages that can do this for me?

Martin Warhurst, Cleckheaton

stf: The best way to do the transfer is to use a sequencer which can accept incoming MIDI on more than one channel and store it accordingly. This is called "Multi Channel" recording. The cheapest package to do this is probably Breakthru (available via STF Mail Order see page 98).

There is a way which you might try with Sequencer One but it is a great deal more fiddly. Put Sequencer One into External Sync mode and then hit Record. Select the correct track and channel to record on and play your piece with every part muted except the first. Repeat this process until all parts are transferred and you can then save the result as a MIDI file.

stf: The simplest method, as used in this listing, is to copy the old X and Ys down through an array, replacing the first X and Y with the new position of the head sprite.

Then you just display one sprite for every three or more X and Y co-ordinates and they look as if they're smoothly following the head sprite.

```
10 key off : hide : curs off : ↓
   mode 0 : update off
15 loke $45A,hunt(start(1) ↓
   to start(1)+length(1), ↓
   "PALM") + 4 : wait vbl
20 dim X(9),Y(9)
30 for T=0 to 9 step 3
40 sprite T+1,X(T),Y(T),1
50 next T
60 for T=9 to 1 step -1
```

```
70 X(T)=X(T-1) : Y(T)=Y(T-1)
80 next T
90 X(0)=x mouse : Y(0)=y mouse
100 update : wait vbl
110 if inkey$<>" " then goto 30
120 default : end
```

Explosive question

Could you tell me how to make an explosion like a firework in STOS? I want to have a big explosion of dots when a ship is blown up in a game.

Patrick Harvie, Manchester

stf: The actual routine is fairly easy to write, but you may find that it is too time-consuming to include in the main loop of your game, especially if you are

going to have one of these explosions when every ship is blown up.

```
10 key off : curs off : hide : ↓
   mode 0
20 palette $0,$777
30 dim X(22),Y(22),SX(22), ↓
   SY(22)
40 dim OX(22),OY(22)
50 logic=back
60 X=rnd(300)+10 : ↓
   Y=rnd(100)+50
70 for T=0 to 22
80 X(T)=X : Y(T)=Y
90 SX(T)=rnd(12)-6 : ↓
   SY(T)=rnd(14)-10
100 next T
110 repeat
120 for T=0 to 22
130 if OY(T)<200 then plot. ↓
```

```
OX(T),OY(T),0
140 next T
150 FLAG=true
160 for T=0 to 22
170 X=X(T) : Y=Y(T)
180 OX(T)=X : OY(T)=Y
190 X=X+SX(T) : if X>319 ↓
   then X=0
200 if X<0 then X=319
210 if SY(T)<12 then inc SY(T)
220 Y=Y+SY(T) : if Y>199 ↓
   then Y=200
230 if Y<200 then plot X,Y,1 : ↓
   FLAG=false
240 X(T)=X : Y(T)=Y
250 next T
260 screen swap : wait vbl
270 until FLAG
280 if inkey$="" then goto 60
290 default : end
```

costs £219.90 including the keyboard kit and is relatively simple to assemble, contact System Solutions on ☎ 0753 832212 for their latest prices and details.

Slow mouse



I have a problem with my mouse when I move it vertically – and no – it's not the Ghost Virus! The problem is that the pointer movement on-screen occasionally slows down to a crawl no matter how fast I move the mouse, and sometimes the mouse only moves in one direction. I have checked for viruses and my floppies are clear although my mouse is rather old.

Marcus Lund, West Yorks

stf: It would seem to be a hardware problem rather than a virus, and it could be one of several things causing the symptoms. If you have a joystick

connected, make sure the auto-fire is switched off. This can cause mouse and keyboard related problems.

If it's not the joystick then it could be the mouse lead. The conductors in the cable tend to break where it enters the mouse body, leading to intermittent faults. Also, give your mouse ball a good clean along with the rollers inside the mouse, muck can build up here leading to erratic and sluggish movements. It could be the actual mouse socket itself, borrow a friend's mouse to see if it has the same problem on your machine. If it does prove to be the socket then the connections need to be re-soldered, a local computer repair shop can do this, or if there isn't one handy contact Ladbroke Computing International ☎ 0772 203166, they have an excellent repair service.

New mice can be found almost anywhere costing between £10 – £15 for a sturdy model, try the Truemouse from Evesham Micros ☎ 0386

765500, it's a 300dpi mouse and costs £14.99.

Information wanted



I am a programmer and I am thinking of writing programs in assembler for the Falcon. The problem is that I need information about the various new hardware bits and pieces in the machine. I know from experience that Atari do not exactly drown their customers with documentation, do you know where I can get the kind of information I need?

Matthew Tomlinson, Kent

stf: You can get official developer's documentation from Atari for the Falcon, they have a package called Doc-Support 6 which is Falcon specific. It contains information on MultiTOS, the clipboard protocols, the internal expansion port, the video port, the DSP, the audio subsystem and the parallel and serial ports. All new XBIOS calls are listed, a DSP assembler and linker guide is provided along with a disk containing a DSP Debugger and DSP Toolkit program. The kit costs £49.95 direct from Atari Technical Support, Atari House, Railway Terrace, Slough SL2 5BZ. Another useful source of information is the new book that HiSoft are including with all the Falcon versions of their programming languages, including Devpac 3. The book is 256 pages long and covers all aspects of programming for the

Falcon, including MultiTOS, SpeedoG-DOS and the DSP chip. The book can also be purchased separately for £24.95, call HiSoft ☎ 0525 718181.

Superbooting with XControl



Superboot and XControl are both excellent utilities, it's a shame that you can't use Superboot to select which CPXs to load. There is a way around this.

1. Place all the CPX files in a folder called Control.
2. Select the CPX path from within the XControl panel to the Control folder and save the settings, this creates a file called CONTROL.INF.
3. Edit the CONTROL.INF file in a word processor, modifying it so the search path reads A:\CONTROL*.CPS instead of A:\CONTROL*.CPZ.
4. Now save the modified file in ASCII format.
5. Run the Superboot Construction Set and configure "Other" file types. Enter .CPS files as type 1 and set the directory to A:\CONTROL*.CPS. Now save the Superboot settings.
6. When you reboot you can select the CPXs you wish to load from the "Other" file menu and XControl loads them as normal.

Ben Irwin, Sheffield

stf: Brilliant – what a useful thing to be able to do – that'll make lots of people's lives so much easier.

MIDI and STOS Best value sequencer

I am a beginner to ST computing and I own a 1040 STE. Which is the best medium priced music software for my STE, and would it work a lot better if I upgraded my RAM? I read your Breakthru review and was very impressed by its potential, but I would like a recommendation on different sorts of software within the price range £100-£200.

David Watkins, Dyfed

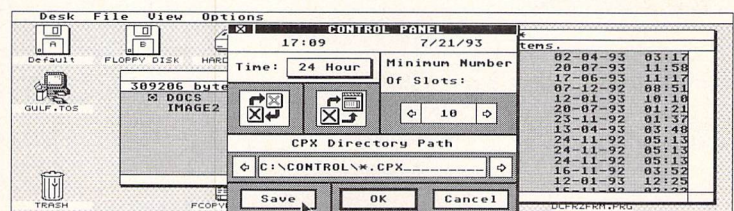
stf: If you are looking for something to control sound samples, as well as MIDI instruments, then Breakthru is quite unique in its price range. It's a fine MIDI sequencer with many advanced features and yet it retains an unequalled level of control over sound samples. Check out our special offers on page 98 if you're interested in getting

hold of the package. If you are prepared to forego the sample features then the scope widens somewhat. You could try Cubase Lite by Steinberg (£99 from Harman Audio ☎ 0753 576911). This is a cut down version of Cubase and features the superb Cubase arrangement window.

For incredible cheapness and good value have a look at Concerto (£39.95 from Microdeal ☎ 0525 713671). This is a great beginner's package which even has score and drum edit features.

If you are going to run Breakthru then the more free RAM you've got the better; 2MBytes of RAM should leave you an abundance of room for all the samples you're ever likely to use. The RAM supplied in your 1040STE should also be quite sufficient to enable you to run the other programs.

Hope that's given you some idea of what's available!

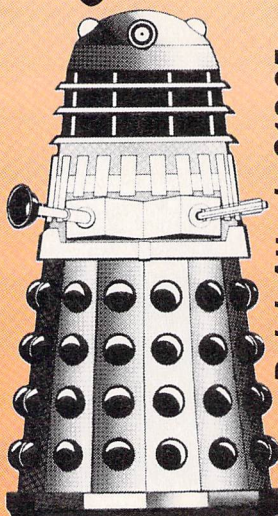


■ It's very simple indeed! All you need is the XControl Panel, Superboot, a word processor and some ordinary household bleach and you can soon cleanly load those pesky CPX modules like nobody's business.

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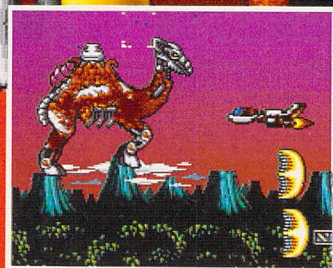
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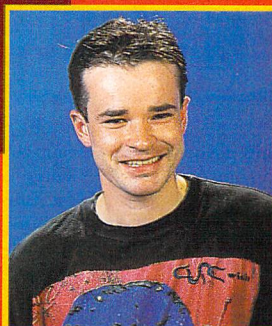
SCREENPLAY



LLAMAZAP

■ Blow the competition away with the world's first true Falcon game. Jeff Minter takes you to the limits of gameplaying perfection in his latest shoot-'em-up masterpiece.

Page 66.



Llamazap and Zool, two of the highlights from this month's collection of top ST games

Rob Mead might look like an Oxfam reject, but he's got talent aplenty when it comes to spotting those great ST games. And he's got some pretty handy tips up his sleeves too.

Hints, tips and cheats

We've got page after page of hints, tips and cheats lined up for you again this month with

Gamebusters on page 82 and the incredibly brainy *Captain Blunder* on page 87

Gamebusters

■ Part One of our extensive playing guide to *Renegade's* zap-tastic *Chaos Engine*.

■ The first instalment of Jaz Pearson's storming solution to *Elvira 2: Jaws of Cerberus*.

■ Level codes and cheat for Daze's colourful platformer *Nicky 2*.

■ A wicked cheat for every level of *Magic Pockets*.

Your guide to Captain Blunder's pages



Availability

You know the game's an absolute corker, but it's disappeared off the face of the earth into the gaming equivalent of the Bermuda Triangle. Captain Blunder's your man, ask him where you can find it.



Cheat

You've tried the jelly on the gatepost and the key on Mr Pibble's nose, but you still can't get past the end-of-level guardian. Looks like you're going to need a cheat from Captain Blunder.



General

It's not techie, you don't need a cheat or tip and you've got the game already, but you've still got a problem. Ask Captain Blunder for the best way around it.



Techie

Your ST explodes halfway through your favourite game. What can you do? Write in to Captain Blunder and get him to sort it out for you.



Tip

You're too honest to cheat, but you wouldn't mind a helping hand either – ask Captain Blunder for some handy advice.



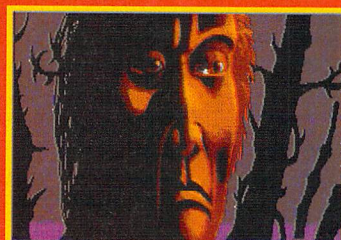
ZOOL

■ Gremlin's ninja ant arrives on your ST armed with lightning reflexes, a wicked smile and a box of Chupa Chups. More colourful platform fun on page 69.



SCRABBLE

■ If triple word scores are your bag, you're going to love the ST version of this classic board-game. Rack up your tiles on page 75.



BEASTLORD

■ The *Shadow of the Beast* returns to haunt the ST one more time, but can its beat-'em-up thrills live up to the spectre of *Street Fighter 2*? A swift uppercut on page 74.



ONE STEP BEYOND

■ Colin Curly's back. *Pushover's* doggy hero makes a welcome return to the ST with level after level of puzzle-solving wizardry. Keep an eye out for the cheesy snacks on page 72.

STF REVIEW POLICY – It is ST FORMAT policy to only review completely finished games – that is, games you could actually buy in the shops, never incomplete or demo versions. We won't be rushed into reviewing unfinished games to beat our "competitors." We assume all games run on 520STFMs unless otherwise stated.

LLAMAZAP



Up, down, to the right a bit, fire like crazy, up again and go left to avoid the flock of angry sheep. Your Falcon finally gets a serious blaster



■ The first level features enormous mutant camel sprites shooting at you. Life's never dull in a Jeff Minter game.



■ A wacky planet with land at the top and bottom, sky in the middle and sheep in danger of being transformed into killer sheep.



■ A rather familiar-looking scenario, shoot the asteroids to break them into smaller ones and smaller ones.

Be honest now, for all the productive and creative things you can do with a machine like your Falcon, what you really want to do is blast aliens. All people go through periods of it, it's perfectly normal and nothing to be ashamed of. *Llamazap* provides the ideal outlet. It's fast, it's frantic, it's colourful, it's noisy, it's brilliant.

The action takes place over five worlds consisting of five levels each and it's a pure arcade game with all the power-ups, explosions and nasties intent on your death that that entails. Each level comes with its own backgrounds, sprites and tactical problems.

You control your choice of spaceship using Atari's new 21 button joypad for the Falcon – you can't play it without one. Get one from Atari for £29.99. Pressing the A or C button sends streams of bul-

COLLECT THE TOKENS FOR A CHOICE OF FREE GIFTS

You won't get far in *Llamazap* without getting a few optional extras bolted onto your ship. Blasting certain nasties releases little spinning llama tokens, picking them up enables you to select more power-ups, each one adds one to the selection. You buy the power-up using the numeric keypad on your new Falcon joypad. From fairly humble beginnings your ship can be transformed into a horribly beweaponed machine

 **CHANGE SHIPS** – There are different ships you can use to deal with the various levels. You can also flip to another ship when you've dented the present ship way beyond repair.

 **SPEED UP** – Gives your crate a zippiness boost, a must for the Condor.

 **ACID RAIN** – This is the special weapon on the Phoenix, it unleashes a shower of nasty acid rain over the screen zapping everything for a short period.

 **WEIGHTS** – The special weapon on the Condor, a mass of heavy weights drops down the screen giving your opponents a hard time.

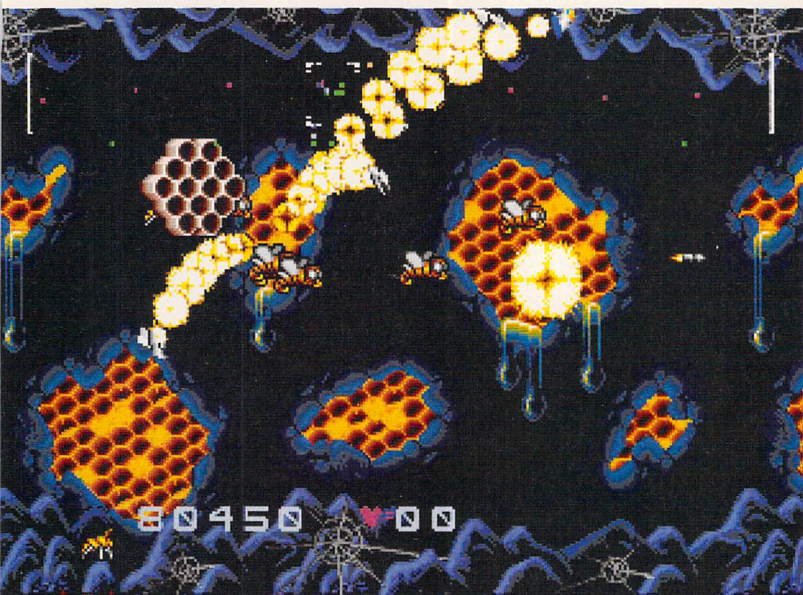
 **INSURANCE** – Just what you always wanted. Once bought if you get mangled and lose a life. Your new ship comes fully equipped with all the extras your previous ship had. A bonus every shoot-'em-up should have.

 **LIGHTNING** – This gives the Falcon streaks of lightning flashing in four direc-

tions giving you the power to cause serious damage to anything that gets in the way.

 **INCREASE FIRE-POWER** – Boosts the destructive level of your weaponry. The Phoenix gets a hotter flamethrower, the Falcon a good scatter effect and the Condor gets more and meatier bullets. An absolute must.

 **ORB TWO-WAY FIRE** – The Falcon's orb can be given a two-way gun firing little orange bullets, giving you a massive spread of fire power.



■ Oh dear, you seem to have become non-viable once again. On the bright side the explosion that engulfs your ship is very pretty, don't you think? Look, there go your legs, flying off into the distance.

lets firing forward and the B button gives you extra turbo speed – this is pretty handy for running headlong into huge baddies and dying horribly.

To complete each level you have to zap all the enemies; sounds easy enough but the blighters don't particularly want to be shot at so they tend to fire back. You get extra points for completing lev-

els with aplomb and saving any innocent creatures that happen to be wandering about. The levels are Defender-like, horizontally-scrolling and wrapping around. There's limited vertical movement too. Take too long on a level and little orb chaps appear and follow you about on a collision course. The longer you take the more of them appear, so getting on with the task in hand



■ This level has you rescuing dolphins from being abducted by space aliens and sinking warships. You're a hell of a lot safer underwater and with the right weapons you can go around sinking all the ships without much hassle, leaving the dolphins to fend for themselves. Life's like that sometimes.

GENTLEMEN, START YOUR ENGINES

Potential Llamazap pilots have three different ships to inflict havoc on the natives with. If one looks like falling apart around your ears then quickly switch to another ship with healthier shields so you don't lose a life

PHOENIX



The hardest ship, it's fast and has good shields but the flame-

thrower weapon has a limited range, you have to get right into the thick of things. You score 16 times as many points as you do with the Condor for your trouble.

FALCON



This ship has a dead handy scattershot weapon

which, when powered up, spreads its bullets over a wide area. It has excellent speed but only fair shields.

CONDOR



The ideal starting ship, it's slow but has excellent shields and

its phage bullets have great penetrating power. New bugs last longest in this bird, although the lack of speed is bit frustrating.

■ After each mission a screen tells you how well you did.

There are bonuses for good play such as protecting small furry animals. Surviving a mission and getting loads of points are different things altogether.



is vital. Complete a world and your progress is saved to disk so you can start on the next level straight away next time.

As soon as you start playing Llamazap you are struck by a cer-

"Llamazap provides the ideal outlet. It's fast, it's frantic, it's colourful, it's noisy, it's brilliant"

tain twisted sense of humour. The nasties include killer sheep, homing cows and giant mutant fish from

hell. There's a good reason for this, Llamazap was written by one Jeff Minter, a man of singular style and justifiably famous for stunning games like Llamatron and Defender 2. Llamazap continues the fine tradition of brain-busting playability and effects.

Sensory overload

Llamazap runs on 1MByte Falcons and you can install it onto your hard drive. If you have more memory than that, it loads all the levels into RAM cutting out all the disk accessing. It runs in overscan on normal RGB monitors. The Falcon's

SLOW DOWN – Sometimes things are very fast and get a little too difficult to control, this slows things down a tad.

SHIELD – This boosts your ship's shield to its absolute maximum.

ORB LASER – The Phoenix can give its orb a devastating expanding ring laser weapon.

ORB – This gives the Phoenix and the Falcon an indestructible orb that hov-

ers close to your ship. Holding down the fire button locks it into position. You can use it as a shield or as a nasty weapon. The Condor gets a rotating orb which constantly circles your ship. It can have up to four of these orbs.

EXTRA LIFE – If you can resist buying all these goodies you can get an extra life by getting these three icons up on screen and flashing. The next token you pick up converts them into an extra life.



■ For the atomic level you need to collect little molecules to break up the big atoms. These then disintegrate into a stream of particles which chase you about trying to kill you. Well, what did you expect? Gratitude?

■ There had to be goats in there somewhere. If you go below the land on this planet your ship turns upside down. Woah.



256 colour mode is used to good effect, it's wonderfully colourful and detailed. The sound is superb as well, with plenty of jazzy sampled effects and a groovy tracker tune blasting away at the same time. The DSP chip is used to replay the sounds with good effect, it's one of the most sonically riotous games you're ever going to play. It's still short of the kind of sound the Falcon is ultimately capable of but it's still pretty groovy. *Llamazap* is also fast, no matter what's happening on-screen it stays swift and super-smooth. It really shows what the Falcon is capable of – simply wild games.

Verdict

Not everybody's fanatical about shoot-'em-ups; wrestling with the

controls of a spaceship plugging away at waves of aliens might not be your idea of nirvana – after all, it's not very mind expanding and won't help you on the path of spiritual righteousness. Fine, don't play them. If you do rate them, then you are in for a serious time. *Llamazap* is awash with gameplay. The controls are extremely responsive, and the levels look and

■ At the end of the first world you come across a frenzied version of *Llamatron*.



■ Before entering the game proper you can test-fly your ships and play about with the power-ups on a calm and peaceful planet. Each ship has different abilities and needs slightly different tactics.

play beautifully and it's heinously addictive.

Llamazap is not a game for wimps. If you are the sort of person who habitually bombs out on the first level of a game then you won't get very far. It needs lightning responses and dedication. Get into it and you're really in trouble. Time passes, people come and go, civilisations rise and fall. You sit transfixed, battling your way through another planet of strange creatures. *Llamazap* eats into all your waking hours and takes big chunks out of your sleeping time too. If



you've been waiting for a game to stretch your Falcon and your game-playing skills you can stop waiting. It's here, it's *Llamazap*.

CHRIS LLOYD

Llamazap

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Highs

■ Fast, furious, colourful, loud and immensely playable. What more could you possibly ask for?

Lows

■ On the difficult side – only the very dedicated and skilled can complete it.



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ZOOL, NINJA OF THE NTH DIMENSION

Get shootin', get runnin', get collectin' – and fast 'cos Zool's here. At last this much-praised

platformer has reached your ST

Ants and chocolate snacks, eh? What do they have in common then? No, not those chocolate ants you used to eat as kids in the belief that they really were chocolate covered ants, but, surprise, surprise (since this is the screenplay section of *ST FORMAT*) an ST game.

That's right, it's *Zool*, apparently a Ninja of the Nth Dimension,

wherever that may be.

In a bid to give the ST its very own version of Sonic and Mario, Gremlin have come up with this super fast scrolling platform game starring an ant. And it just happens



to feature another not so discreet marketing ploy with the inclusion of the Chupa Chups logo all over the place. It seems that they make chocolate

Check out *Zool* before you buy it with our demo of the third level on this month's Cover Disk.



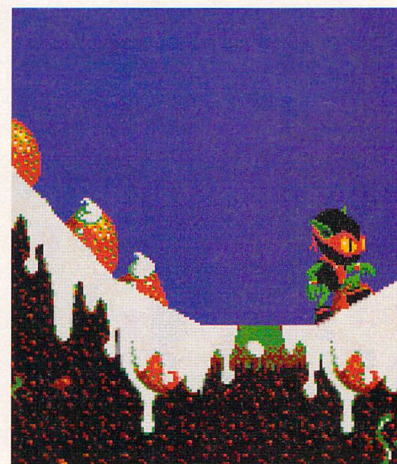
WHAT EXACTLY IS WHERE?

There are lots of interesting numbers scattered around the playing area and they all mean something different. This is what

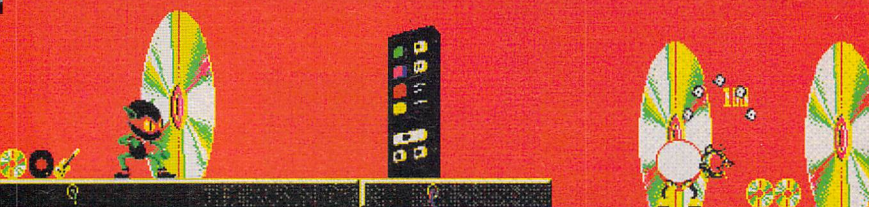


- 1 SCORE** – how many points you've earned.
- 2 HEALTH** – keep an eye on this; if it runs out you lose a life.
- 3 HIGH SCORE** – how many points you've got to try and beat.
- 4 NUMBER OF LIVES REMAINING** – how many more goes you have on this particular level.
- 5 HOW MANY SECONDS REMAINING** – before you disappear in a puff of smoke.
- 6 DIRECTION OF THE EXIT** – keep an eye on this to check you're heading in at least vaguely the right direction to exit the level.
- 7 PERCENTAGE OF BONUS POINTS** – you've collected from the level.

bars and lollies so it seems only fitting (or was that "commercially viable?") to make sure the first world you enter is that of a sweetie land. *Zool*'s not particularly cute or clever or attractive – or even immortal, he can just move really fast. Unfortunately he's not



Just think how much more exciting this could have looked on the STE, had there been an STE enhanced version; all that sky could have been prettily graduated. Still, it's bold and bright.



■ Walking cymbals are your main enemy here. You can't punch 'em but they don't last long if you jump on 'em. Ha!



■ The more inanimate objects you pick up, the more points you get. Not much of a novelty, that.



the only thing in the game that can move so speedily – all the baddies are equally mobile.

Nothing unusual here

Zool's a platform game of the most traditional type – there are collectibles to collect, platforms to jump between and end-of-level baddies to kill. Although all the levels get progressively harder, the game doesn't exactly start off easily

– you're assaulted by all sorts of animals, jellies and other things that seem to be able to render you into a non-being merely by looking at you; your finger's firmly attached to the fire button and your wrists are coming in for a severe bit of movement... and then you die.

On all of the levels, so that you don't have to start back at the beginning of each one when you lose a life, there are various targets for you to hit – on one level you get a sign and on another you get a half buried banana. When you reach them in your quest for the exit, to get out of this assault on your nerves and your hands, you have to punch them. Since you have to be in exactly the right position for this you do tend to leave

■ Watch out for this most deadly of weapons – just one spraying with the popcorn and your energy is severely diminished.



yourself open to attack – and this is especially frustrating dying at this point just as you're planning ahead for when you do die – you hope not

“You're assaulted by all sorts of things that render you into a non-being by merely looking at you”

to be caught in the act. It's a good touch, though, making you have to work for your life rather than just giving you random restart points.

This way please

There are other good touches too – being told the general direction of the exit is quite helpful in that it gives you something to aim for and also being told what percentage of the objects you've picked up is pretty good since they seem to mount up rather

quickly and that just makes you feel good about the world and life in general. Bonus levels and increases in your life expectancy also make the game more attainable – if you just died all the time you'd soon get pretty fed up with it. As it is, however, on the occasions when the screen stops, goes blank and you're left thinking you've gone and committed suicide yet again and the words “Bonus Level” appear, you're ready to forgive all and sundry everything they've ever done to you. Well, almost.

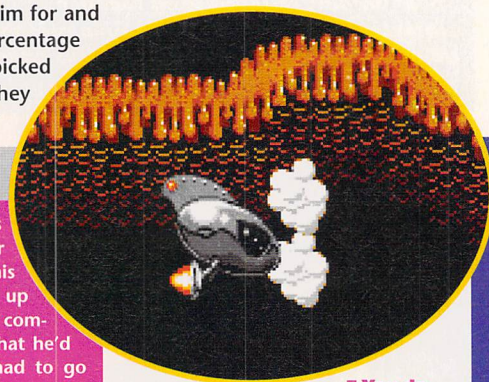
The levels are split up into six sections and you have to work through each one before you progress to the next – they're just extensions of the world you're in. Graphically all the worlds have pretty much the same look about them but the creatures that inhabit the worlds and the tricks that are up their sleeves are completely different. Whereas in the sweet world you have to watch out for killer

What's he doing here anyway?

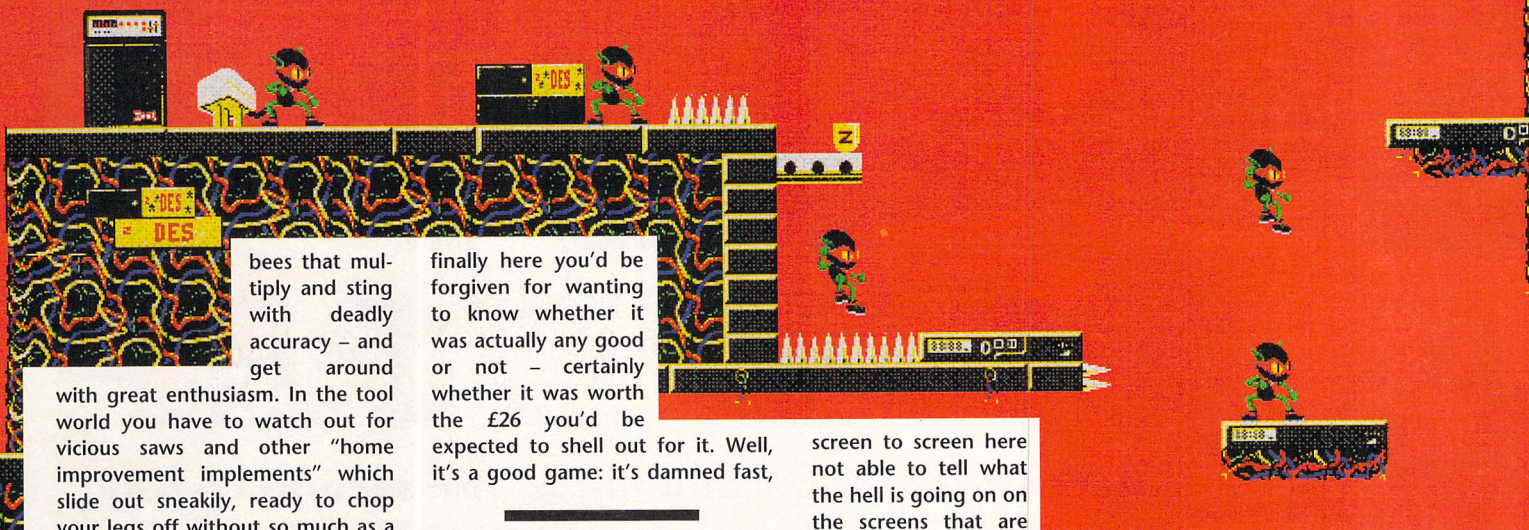
Plots and manuals traditionally have nothing at all to do with the game. Zool is no exception – all you have to know is where you can find the fire button on your joystick. You might, however, care to do a survey of the most ridiculous excuses ever given for creating a game. This has to rank among the worst.

You see it all in a glorious monochrome cartoon as the now-grandfatherly Ninja ant relates the tale to his rather girlie-looking offspring. Basically, Zool was on his way home after some very heavy Ninja-ing in his spaceship and experienced this strange wobbling. Being of a curious nature (and not wanting to let down the side of the Inter-

galactic Ninjas) he investigated. The ship was somehow taken over by this rather bizarre power (OK, so the plot gets a bit sort of vague at this point) and was drawn into a vortex, ending up splunched in sweetie land. Fortunately Zool's computer was still unharmed and able to tell him that he'd been taken to the land as a challenge – he had to go through six challenges in six worlds facing lots of enemies and other hazards, and collect objects. Zool realised there was nothing else for it, especially since his ship was due to blow up in seven seconds to stop thinking about his bad fortune and get on with it. And that's it really. Good, eh?



■ You do something clever and end up here on this bonus level. If you work out what, please tell us.



bees that multiply and sting with deadly accuracy – and get around with great enthusiasm. In the tool world you have to watch out for vicious saws and other “home improvement implements” which slide out sneakily, ready to chop your legs off without so much as a “Look out, I’m about to chop your legs off.” By far the worst has to be the bag of popcorn which you don’t seem to be able to avoid but which gets you every time you go near it – the popcorn explodes all over the place and you end up getting hit. Each world has a vicious beastie you have to kill before you can progress to the next, just to make matters even harder.

Verdict

Zool’s been a hell of a long time in coming to the ST and now it’s

finally here you’d be forgiven for wanting to know whether it was actually any good or not – certainly whether it was worth the £26 you’d be expected to shell out for it. Well, it’s a good game: it’s damned fast,

“It’s huge, it’s playable, it’s frantic, it gets the adrenaline going and your trigger finger aching”

it’s huge, it’s playable, it’s frantic, you’re against a time limit, there’s variation between the worlds with different tactics needed in each of them, it gets the adrenaline going and your trigger finger aching. It looks OK and plays pretty well – it’s very speedy and incredibly smooth scrolling – none of that jumping from

screen to screen here not able to tell what the hell is going on on the screens that are the next ones along. But it’s not brilliant – it doesn’t have that certain elusive whatever it is that makes a great game great. It doesn’t have the humour and the personality of that other most recent classic *Lemmings 2* (against which all other platformers are bound to be compared) – indeed it doesn’t even have the variation of that game. It doesn’t require you to use your brain apart from to direct your finger to hit the trigger – there’s none of that puzzling things out and thinking logically. If, though, all you want to do is hit

Fire and get hot and sweaty over your ST, you could do a lot worse than getting Zool to do it with. **stf**

Zool

£25.99

Gremlin Graphics
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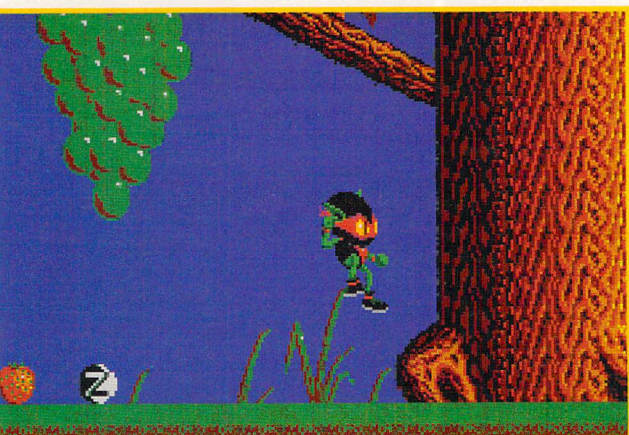
Highs

- Huge and very playable.
- Incredibly fast and smooth scrolling.

Lows

- Lacks originality and humour.

89%
BEST RATING



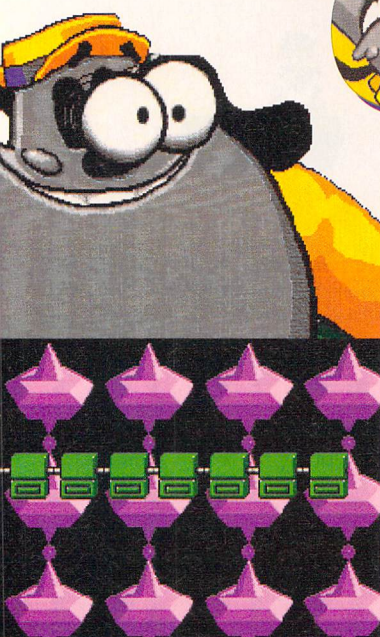
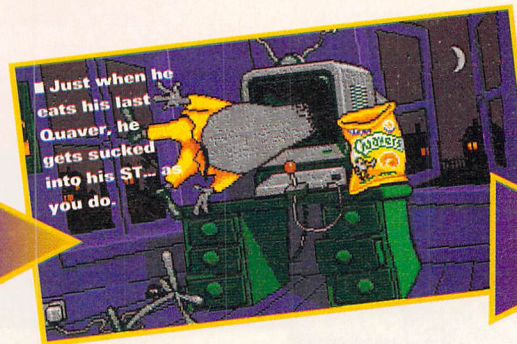
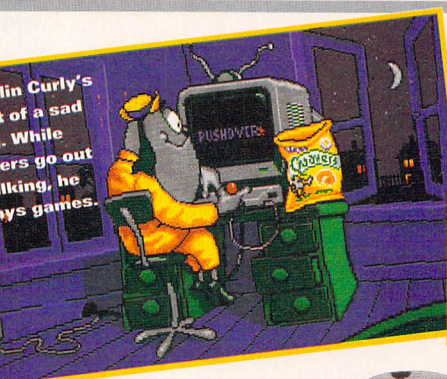
■ Watch out for those grapes. They might look friendly and sweet and as if they probably haven’t got those inconvenient pips in them, but they have a nasty side to them when they come alive. Don’t say we didn’t tell you – you have been warned.



■ Getting around in the music world can sometimes be less effort than you’d think – just sit on that horn and you get taken into the stream of music... and bump down rather unceremoniously.



■ Level One and you’re up against the sweetie nasties. And the bees, and those vicious spikes and the bridge that collapses if you hang around on it for too long. Easy life.



ONE STEP

Here is, starring Colin Curly, the second cheesy snack puzzle-'em-up. David Roberts checks it out and measures it up against its predecessor

Computer games are a bit like crisps. Once you've got a recipe that sells well, all you need to do is change the flavour slightly every now and again and hope that it will be to the taste of the masses. Ocean have obviously copped on to this particular trade and, in association with Quavers, have just released a sequel to the *FORMAT* Gold-winning puzzle game, *Push Over*.

Quavers smell 'orrible

One Step Beyond stars the one and only Colin Curly – yes, he's the stupid looking canine who lives entirely on a diet of curly, yellow-coloured, cheesy sort of snacks and goes absolutely mad if he doesn't know where his next Quaver is going to come from. While Colin was enjoying a

great night in, playing *Push Over* and stuffing his face with those damn crisps, he experienced two simultaneous happenings – as he popped the last Quaver into his mouth he also completed the very last domino-like puzzle. This one in a million combination resulted in Colin being digitised and sucked into his own computer.

The thing is, Colin's trapped, as it were, and to get out he needs to complete a number of puzzles that aren't too dissimilar to those you had to solve in *Push Over*. OK, so in that game you had to control an ant and pick up and place

domino type bricks in a particular order to complete the level.

In *One Step Beyond*, the concept is pretty much the same, except that you have to make your way from the Entry Quaver packet to the Exit packet. You do this by jumping off and on a number of platforms that may or may not have special properties (see the I'm So Special panel below). As the friendly cartoon dog steps off a platform, it slides shut behind him and it doesn't open up again unless it's one of these special platforms – to complete the level all the platforms need to be shut.

■ Check out some of the backgrounds, they're actually quite pretty. By the way, this level is dead easy. Ah, well.



■ Product placement, eh? This sort of game is becoming more and more popular as companies are discovering the power of computer and video games.



■ Jumping on and off the Delay platforms is a bit of a nightmare 'cos you never quite know when they're going to close.

I'M SO SPECIAL

To get through all the screens you need to understand what all the special platforms actually do. Take a look at our very own guide to those tricky attributes



SAFE

A friendly platform. It doesn't close and Colin can jump on to it for a bit of a breather. Note that if you activate a Ray or a Shutter platform, the Safe platform operates as a totally normal platform and follows those special orders.



HORIZONTAL SHUTTER

This closes all platforms on the same row as Colin jumps off it.



HORIZONTAL OPENER

Does the exact opposite to the Horizontal Shutter – it opens all the platforms in the same row as soon as Colin lands on it.



BOUNCE DOWN

Closes as soon as Colin lands on it and drops him to whatever awaits

him below. If there are no platforms below for him to land on, he dies and you lose a life.



BOUNCE UP

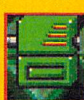
When you land on the bounce up, Colin does a wonderful somersault and lands safely on a platform two platform levels above – that's if there's one there that's still open.



DELAY

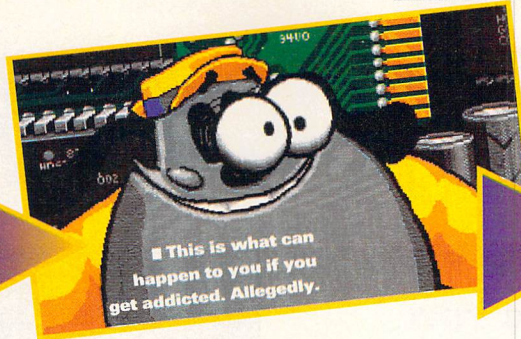
The Delay platform is extremely useful – it remains open for about

15 seconds after Colin moves off it. This enables Colin to retrace his steps and use the platform again within the 15 seconds time limit.



IN AND OUT

This one is a little on the tricky side. The platform continually slides in and out, so you need very careful and precise timing to land on it safely. Once Colin has landed on it, it stays open until he jumps off it again. It then returns to its open and close routine.



BEYOND

Get a grip

Getting to grips with the control mechanism is the key to success here. Yes, you could probably say the same about most platform games, but in this case if you don't master the joystick controls, you will probably end up eating your ST in frustration. Pushing Left, Right, Up Left and Up Right makes Colin jump one platform in that direction, but if you press the Fire button at the same time, you end up jumping two platforms in the required direction. The problem is, the Fire button doesn't always register and you end up waving goodbye to dear old Colin Curly as he misses the final platform 'cos it's two platforms away and not one – don't you just love blaming the joystick for everything?

The graphics are nothing special. Sure, the intro screen is all

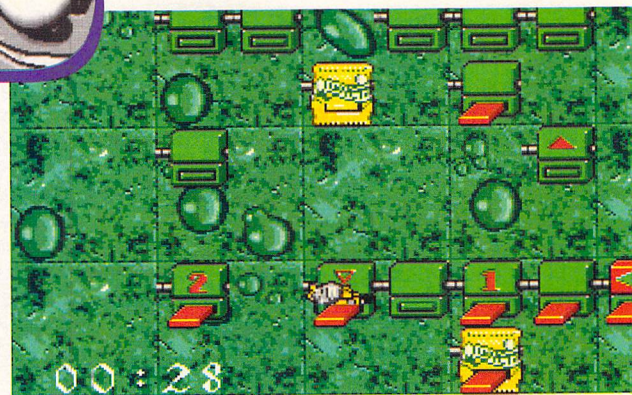
very pretty – it's a sort of animated sequence that shows Colin (the dog) playing at his computer, eating Quavers (nothing new there)

"This one in a million combination resulted in Colin being digitised and sucked into his own computer"

and then being sucked into the said machine. But apart from that, the graphics are almost of exactly the same type as those you saw in *Push Over* – nothing spectacular, but not totally dire either.

The puzzles themselves start off quite easy. You know, just a few

■ If you make Colin jump too high and he lands on a platform, he'll die. It's not a good thing for him to die, so don't let it happen. Got it?



normal platforms (that is, the ones with no special attributes) for you to close. And bit by bit, as you get from one screen to the next, you have to use the special platforms to get to the end of each level. There are platforms that slide in and out at regular intervals and which require excellent timing if you want to land on them while they're out. Then there are those that catapult Curly to the left or to the right and others which only close 15 seconds after the canine jumps off them. It's all very frustrating stuff, and the puzzles do get much harder as you progress through the screens.

There's a simple level code system to enable you to take a break from the game – go and have your tea and watch a bit of TV and come back to continue exactly where you left it. You can also pick up tokens as you go through the levels – you use them when you're on one particularly difficult level and do something wrong at the very end. So, instead of starting the level all over again, you give up a token and you continue from the last platform you jumped from. Handy, eh?

The thing is about these type of puzzles is that if you really concentrate you can solve it visually. Once you've sussed it though, you quickly realise that the hard part is actually getting Colin to do what you want him to. It says in the manual that when you're using a joystick you are going to need a lot of practice, especially if you want to master the diagonal movements. It's a pity that the controls aren't a little more intuitive.

Curl-me-up, Colin

The only way to look at a puzzle game is to compare it to the best ever game in the genre. OK, so it might not be the fairest of ways, but at least you get a pretty good idea of what the game's like. Well, *One Step Beyond* doesn't come near *Lemmings 2* – and that's that. In fact, it doesn't even reach the brilliance of its predecessor, *Push Over*. The thing is, *Push Over* was original and the puzzles quite demanding. *One Step Beyond* doesn't really bring anything new – it features the same sort of elements with the same dim dog and those cheesy snacks.

If you already have *Push Over*, it's not worth buying such a similar game. But then again if you really liked it, you'll probably like getting your teeth into *One Step Beyond*. If, on the other hand you never bought *Push Over*, this is a mediocre alternative. **stf**

■ So you know what the aim of the game is. Start from one Quaver packet (which Colin's emptied) and get to the next one.



BOUNCE UP RIGHT

This control operates in the same sort of way as the Bounce Up platform; instead of somersaulting him it throws Colin two platforms to the right and two platform levels upwards.



BOUNCE UP LEFT

It's probably safe to say you that you know what this control does – this one throws Curly two up and two to the left. Are you getting the hang of this?



RAY SHUTTER

These handy little platforms close all platforms which are situated along the diagonal paths. These are indicated by the arrows on the special platform icon. The platforms close as Colin jumps off the Ray Shutter platform.



NUMBERS

Platforms with numbers on them have to be visited in numerical order, if not the Exit function does not operate.

One Step Beyond

£25.99 Ocean
061 832 6633

Highs

■ The graphics are alright and some of the puzzles can be quite difficult to solve.

Lows

■ You've seen it all before in *Push Over*, except for the dominoes have become platforms.



BEASTLORD

You talk to the animals, kick people in the head and run around in a loincloth. What a barbarian, eh?

You are the chosen one, the Sleeping Guardian sought out by the mind of the All Seeing hawk. Unfortunately this doesn't involve huge supplies of fudge ice-cream, the company of supple women and everybody going about saying what a truly special and wonderful person you are. It involves doing battle with the forces of darkness and getting knocked about a lot. Life's like that sometimes; just when you thought people had suddenly realised that you were right all these years, it turns out they just wanted a favour.

Fluffy the squirrel is your friend

Beastlord is a mix of arcade and a puzzly sort of adventure – you have



■ **Oops, you've run straight into a gaggle of orcs and made a thoughtless remark about ancestry. Guess you're going to have to beat them all up now.**

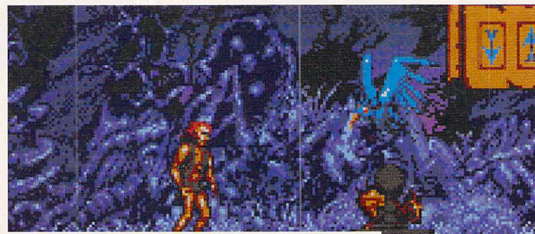
to figure out how to find and defeat the big baddie at the end. You run left and right along the scrolling screen searching for items and avoiding too much trouble. You can jump, kick and punch using your joystick as well as use the menu to control the more adventurous stuff like collecting and using objects.

Rather than just fighting your way to the end you have to solve a series of puzzles involving spells, objects and animals. You can talk to animals, you see. In fact, that's vital if you're going to get anywhere.

The graphics are colourful and pretty, although they're not the best drawn of sprites they are more than passable. The sound isn't, however, apart from an amusing slapping sound when you catch someone on the chin it's fairly dire during the rest of the game. Annoyingly you have to swap disks to see your death sequence before starting a game again, slowing things down a lot.

Verdict

Although the mix of beat-'em-up and puzzle solving is refreshing, especially the talking to the animals



■ **You save the world by rescuing the guiding light from the clutches of the dark one by a combination of wit, skill and hitting people.**

bit, the game turns out to be dull, largely because the character you play spends so long getting from one place to another. You spend great chunks of the game watching yourself running in slow motion from one end of a level to the other. It's easy to screw things up, too. Punch the wrong person, loose an important animal or object and that's you stuffed. It's back to the last saved position to start again.

Beastlord is likely to suit you if you're a meticulous games-player but if you crave great rushes of adrenaline or convoluted plots and conundrums you're just not going to find 'em here. The game plods along in a careful but tedious sort of way.

CHRIS LLOYD

■ **The puzzles are simple enough but realising what they are can be a time consuming business as you run from one end of the map to the other in slow motion.**



■ **A chance to prove what a true hero you are by kicking a drunk repeatedly in the head.**

Beastlord

£19.99

Grand Slam
081 6807044

Highs

- A sizeable playing area and some pretty graphics.
- You get to talk to squirrels.

Lows

- The pace of the game is very slow, you run as if through treacle. It's easy to get it wrong and be unable to complete a section without starting again.

54%
US RATING

THOSE FUNNY BOXES AT THE TOP OF THE SCREEN

You control your character with a combination of joystick and mouse. The joystick handles the running about and hitting side of things while the mouse is used to select items from the menu at the top of the screen; sounds as awkward as it actually is. Here are the menu items and their functions in great detail

- 1 Pick up object** – fallen foes often leave something useful behind, like gold and the odd mouldy potato.
- 2 Drop object** – in case you've already got a mouldy potato, thank you.
- 3 Give object** – being the sort of modern day caring barbarian that you are, you feel the need – at times – to give away the objects that you collected to people, when punching them doesn't seem to work.

- 4 Trade** – to get the required object to solve the puzzles often means getting something else you can do a swap with.

- 5 Pause** – dead handy when the phone rings.

- 6 Inventory** – calls up a little window with all the items that you've begged, borrowed or stolen.

- 7 Heart** – Click on heart to check your health.

- 8 Talk** – click on this and any nearby creature not actively trying to kill you stands still and you can type in what you want to say at the keyboard. The word "help" is often a winner here.

Later on you need to give specific commands to animals which can get frustrating.

- 9 Eat** – Time to get stuck in.

- 10 Cast spell** – get the trading right and you gain a few vital spells.

- 11 Break** – if you're quick witted you'll have worked out that this means you have to break something at some stage.

- 12 Use** – use an object you're carrying – an invisible jacket, for example.

- 13 Load and Save game** – playing *Beastlord* without these would be impossible.



SCRABBLE

A classic conversion of the board-game or just a turkey? Paula Richards thinks it must be Christmas

Board-game conversions onto your ST might seem a little silly, however well they're done – and the idea of converting *Scrabble* is no exception. Everybody knows how to play the game, but just in case you've had your head stuck in the sand since you were born, it's just a matter of creating words from the seven letters you've picked randomly from the pool, then interlocking them with other words that are already on the board. The letters score differently, depending how frequently they're used in words and you can increase your score by a bit of tactical positioning on double and triple word scores. The ST version isn't so dif-

ferent, except that you have a bit more control over the level of competition you undertake. You can choose from Level A – the easiest – to Level L which is virtually impossible. You don't have to work through the levels before you progress, so if you fancy feeling incredibly smug, just pick Level A, with its vocabulary of 2,400

short, very common words where scores are usually less than eight points. On the other hand, if you're in the mood for a bit of masochistic depression, pit yourself against Level L which uses 134,900 words including all words of nine letters or less, strategy (which presumably means peeking to see what your letters are and trying to prevent you from putting down your prize words) and it also tries all letters for blanks.

There's also a Help option if you play in the Practice – as opposed to "Competition" mode, which consists of telling you how many other words you could have chosen which would have given you a higher score. Investigate this a little further, however, and you find that (a) it's not actually sur-



■ You have the option to change your tiles with exchange, pass if you can't go, ask for a hint or some help if you're feeling a bit stuck with your lousy letters, or, for really abysmal games just stop the whole thing.

dictionary is an essential part of the gameplay, but the problem with the ST version is that you can't argue with it – and this wouldn't be so bad if it didn't permit so many ludicrous words for itself, but you're allowed to get away with very little – and then you lose your turn if it's not in the dictionary.

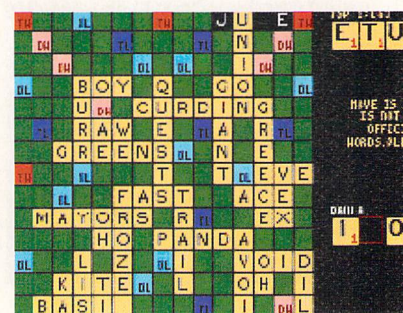
If you get enough of your ST's overbearing attitude, you can always try and get some of your friends involved – you can have up to four players taking part and you can alter the length of time from the standard 25 minutes to play to take into account their quick-thinking ability.

Graphically, the game hasn't much going for it – but then what can you do with a *Scrabble* board and a few tiles? Sonically, there are a few sort of sound effects but they don't exactly add a great deal to the atmosphere – they certainly don't make up for the despairing sighs and cries of "that's not fair" you'd get if you were playing the real thing.

Verdict

The main problem lies with the fact that this has some extremely bizarre words in it – words you would never let a human opponent get away with. 25 minutes isn't

actually that long to play a decent game of *Scrabble*, although if you used all the Help and Hint options you might get to the end a bit faster, but that would ruin the fun of the game. Rather than adding anything to the board-game – and that's despite having the ability to print out your score sheets – this ST conversion takes away most of the fun. There seems little point in bothering with it. **stf**



■ *Scrabble* may refer to the Official *Scrabble Dictionary* – but who included "Ae" and "Lis" as words?

Scrabble

£27.99
US Gold
021 625 3366

Highs

■ Plenty of difficulty levels, a challenge.

Lows

■ Spelling mistakes and non-existent words are included.

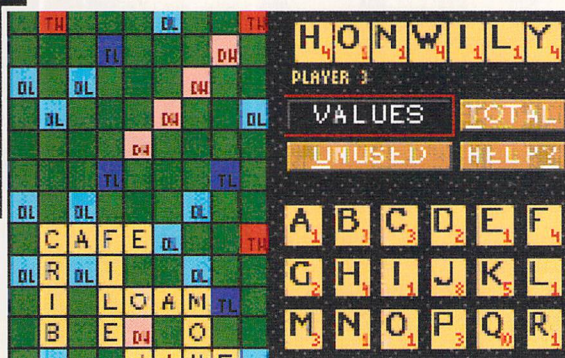
57%
SATISFACTION



■ Just to make sure you don't get too cocky when you're playing, your ST tells you how much better you could've done.

ferent, except that you have a bit more control over the level of competition you undertake.

You can choose from Level A – the easiest – to Level L which is virtually impossible. You don't have to work through the levels before you progress, so if you fancy feeling incredibly smug, just pick Level A, with its vocabulary of 2,400



■ Check how many tiles are left in the pool to see if it's worth your while exchanging your selection.

prising you didn't think of a particular word because it's not in your vocabulary – like "EE," for example (b) it wouldn't interlock with all the other words on the board, giving you some very weird combinations that couldn't possibly be described as words and (c) there aren't actually that many more words – just different positions you could have put them in.

Scrabble usually includes plenty of healthy bickering about what words are real or not and a

■ This is the sort of help the game can give you – judge for yourself how useful it actually is.



TOKI

In some ways, this is still one of the ST's most accurate coin-op conversions ever. As long, that is, as you stick a big cardboard panel over your TV screen with a hole cut in the middle so that it looks like you're using a 10-inch portable. Otherwise, the claustrophobic inside-a-postbox feeling that you get from the tiny area of screen used to display the game is almost enough to completely annihilate any fun you might be getting from it.

It's a real pity that in order to preserve smooth scrolling of the



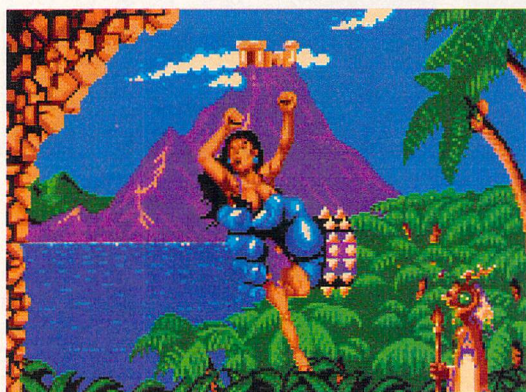
■ This game's so annoying sometimes, it just makes me want to spit. Hey, hang on a minute...

beautiful and detailed graphics of *Toki*, the programmers have to crush it into such a tiny hole. Because in every other way, it really is a lovely game. You play an acid-spitting ape, recently transformed from a hunky prince

type by an evil sorcerer who's kidnapped your babe into the bargain.

The only way to rescue both her and your own manly good looks is to traverse five levels of Amazonian terrain,

■ How can you be overpowered by something that hasn't even got a torso, woman?



slaughtering a sufficient amount of indigenous wildlife along the way to make even Prince Philip go "I say, steady on, old man." It's not an easy task, and it seems to be made psychologically even harder by the fact that you seem to have such a small space to manoeuvre in. Actually, this isn't just an optical illusion brought on by the aforementioned titchy screen area – the same problem was present in the original coin-op and in other conversions. There's not usually a lot of room for error in *Toki*, and it can make the game very frustrating when you get splatted by one of the unforgivingly mean nasties nine times in a row in the same place.

Verdict

Still, it's worth persevering – the graphics start off pretty and improve all the way through, and there's enough in the way of interesting touches and visual rewards to



■ That claustrophobic tiny-screen effect in full, for your greater understanding. Thank you.

make it worth the concentration and effort you need to expend to get anywhere. This is definitely worth a tenner.

STUART CAMPBELL

Toki

£9.99 The Hit Squad
061 832 6633

Highs

■ Lovely graphics, very much like the coin-up version.

Lows

■ A small screen area, frustratingly difficult at times.



STRIKE FLEET



■ If you've ever wanted to be tied down with battlechains...

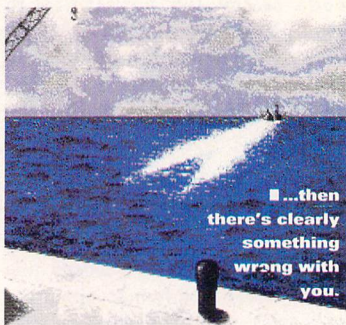
Well, here's a nice change for a start – a naval simulation that doesn't use World War 2 as an excuse for being slow and crap (Ah, but warships really did go at four knots in 1943?)

Strike Fleet is just about as up-to-the-minute shiny and modern as you could possibly expect, boasting Exocet missiles, Lynx helicopters and nuclear submarines as well as a huge fleet of more traditional battleships, frigates and cruisers.

All this modern technology doesn't even have a price to pay in terms of forbidding complexity, either – this is one of the most

accessible sims around, and with a helpful manual that assumes absolutely nothing, you can patrol the Straits Of Hormuz with the best of 'em inside half an hour.

It's not all patrolling, patrolling, of course. There's no shortage of action in *Strike Fleet*, with theatres of war ranging from the Gulf to the Falklands, and every shade of enemy you could ask for to do sea-bound battle with. You control up to 16 ships at a time, as well as reconnaissance helicopters for added strategic information, so there's no need for any of the long hours of featureless steaming around that dogs



■ ...then there's clearly something wrong with you.

so many olde-worlde seafaring sims. When you do come across something to shoot at, it's handled well too, and within the predictable constraints of the genre, it even looks alright, although as you might expect, when you're shooting something from three miles away you don't actually get to see much in the way of graphic detail.

Verdict

Despite the fact that it is at the distinctly pricey end of the budget market, it's very hard to argue that you're not getting value for money for your £12.99 when you purchase *Strike Fleet*. You can have days and even weeks of delightful fun out of this, and not just because you're waiting for the screen to update either. Even arcade-fixated landlubbers are likely to get a little bit of fun out of this, so if you've ever harboured (ho ho) naval ambitions, *Strike Fleet* will be right up your strait. Sorry.

STUART CAMPBELL



■ I suggest you seek medical help immediately. They've got a name for people like you. You deviant.

Strike Fleet

£12.99 The Hit Squad
061 832 6633

Highs

■ Tense and atmospheric, lots to do once you get into it, more up to date than most boat sims

Lows

■ Very slow moving, looks as bad as you'd expect – one for specialists only.



CHASE HQ 2 - SPECIAL CRIMINAL INVESTIGATION



■ Jaguar games look just like this. Most probably.

First things first – if you’ve ever played the ST version of the original *Chase HQ*, don’t panic. This is nowhere near as shabbily-programmed or aesthetically distressing as that nightmare disaster of a travesty of decency, so sighs of relief all round. Mind

you, it’s still a long way short of being a classic.

For some reason *Chase HQ* just doesn’t seem suited to micros, having been pretty appalling in virtually every incarnation it’s had, with the notable exception of the Spectrum version where keyboard controls eliminated much of the physical pain of having to continually hold the joystick forward for acceleration and wrench it from side to side on the diagonals to perform the smallest of on-road movements.

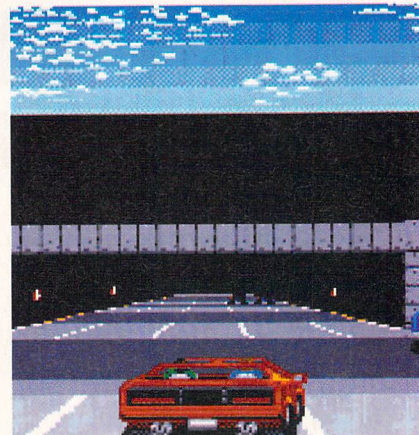
That’s the main problem with this version of the game, mainly because of the exceptionally jerky side to side scrolling which means you’ve got a titanic struggle just trying to keep your alleged high-performance sports car on the road as it lurches wildly around trying to

keep up with the erratic and sudden movements of the screen. It’s tough to keep it away from other road users, too – the cars of the Sunday drivers who make up most of the traffic on these town and country highways appear in front of you with almost no warning, and you spend as much of the game filling in accident insurance claim forms as you do chasing bad guys.

Verdict

Still, *SCI*’s not really that bad. If you’ve got strong hand muscles and unfazeable eyesight, this is quite a diverting and tricky racer. You won’t finish it in a day, for sure, and you’ll certainly get ten quid’s worth of entertainment out of it. The question is whether you can get more than ten quid’s worth of entertainment by spending the same ten quid on something else.

STUART CAMPBELL



■ To simulate left and right turns, look at this grab while resting the magazine on top of a washing machine on spin cycle.

Chase HQ 2

£9.99 The Hit Squad
061 832 6633

Highs

■ Much better than the first game.

Lows

■ Very jerky scrolling around bends.
■ Annoying control mechanism.

61%
STANDARD
RATING

HARDBALL

Blimey, this takes you back, it’s been around for years. It’s still a baseball game, though, that dullest and most pointless of sports simulations.

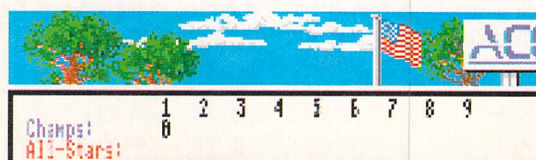
Basically, this is a game of *Stone, Paper, Scissors* – your ST or human opponent chooses a type of pitch, you choose a type of swing, and, if you’re lucky, bat connects with ball and sends the latter flying off on a suspiciously arbitrary-looking flightpath, where another helping of luck sees it (probably not) flying straight into the waiting palms of a fielder. At this point the

single screen that you see for most of the game switches to a rudimentary fielding screen where robotic characters twitch their way around while you try unsuccessfully to decipher the control contortions that enable you throw the ball to the pitcher or try to steal second base, and then it all starts all over again.

Verdict

This is dull, and there’s no excuse for a game as dull as this selling for ten quid in late 1993 – it was a stupid idea in the first place, but it’s been executed ineptly, it looks naff (six of the eight screenshots on the box are of the same screen...), the only sound consists of a horrible burst of white noise when you

■ (Right) Oh God. Just look at it. You don’t need me here.



■ (Left) The Hit Squad liked this picture so much, they put it on the box six times. And looking at the one above, who can blame them?



■ “Hardball”? “Load of old crap ball”, more like.

finally manage to hit the ball, the presentation is cheap, nasty and confusing and there’s practically nothing to do. But then the game was written six years ago – what did you expect?

STUART CAMPBELL

Hardball

£9.99 The Hit Squad
061 832 6633

Highs

■ Um... quite good animation on the pitcher?

Lows

■ Almost no sound, looks primitive, not much to do – and how old is this now anyway?

30%
STANDARD
RATING

THE SECRET OF MONKEY ISLAND



At last. After years and years of waiting and several vastly-over-subscribed petitions and questions asked in the House, the most famous adventure game of all time, most probably, has been re-released at a budget price. And, on a second look, you can see it's crap.

Before writing this review, I hadn't seen anyone play the game. I'd just heard such good things

about it. So when I loaded it up I was understandably disappointed. A good adventure needs an involving, complex plot. *The Secret Of Monkey Island* doesn't have one. A good adventure should be scrupulously fair. *The Secret Of Monkey Island* isn't. A good adventure, if it's of the graphical variety (as *Monkey Island* is), should have excellent pics, with atmospheric background pieces and well designed, finely animated sprites. *The Secret Of Monkey Island* has neither of these. Nor does it recognise a second drive, install on a hard disk or boast a mightily friendly point-and-click interface. And the jokes are dreadful.

Verdict

Time to come clean, it's all a big lie. But the sheer fabulousness of *The Secret Of Monkey Island* is so well known that any review is going to be utterly predictable. So we'll concen-

trate pedantically on the few objectionable points. First, the relentless chirpy American tone of the piece. But that's beyond anyone's control. Er, the sound is a bit on the sparse side and not really worth waiting for. Er, er, the way the gameplay stops and starts in jerky movements instead of flowing along in a nicely smooth fashion? But that's another lie. (Damn.) Ah. Got it.

There's a lot of moving around in *Monkey Island* - walking from one location to another and back again, and so forth. There are no short cuts. You have to wait for Guybrush to troll all the way across the screen every time, and if you've just walked him across the map from location A to location B then suddenly realised that you've forgotten to bring item C, that's more than slightly annoying to say the least. And another thing - the game feels all linear and set up (but such is the nature of multiple-choice adventure things). And once you have completed it, you will never ever play it again. (It's really quite easy. At least, up to the



Unfortunately, you can't kill the salesman man. A tragic oversight.

point where I became totally and utterly stuck, hem hem).

So there you have it. *The Secret Of Monkey Island* is a fabulous game. Truly scrumptious, in a Dick Van Dyke-free fashion.

JONATHAN NASH



Guybrush takes time off to investigate the local flora. Not very funny but informative (to a degree).

The Secret of Monkey Island

ETBA US Gold
021 625 3366

Highs

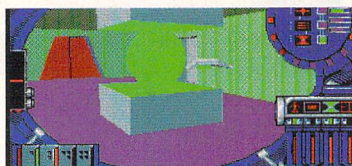
Look, it's *Monkey Island* for less money, OK?

Lows

None at all.



CYBERCON 3



Well, it's some sort of big green blob, obviously. What sinister purpose it serves, I know not. Because I'm crap.

They must be stupid in the future. According to game designers, sci-fi novelists, comic book authors and HG Wells, machines will eventually become so intelligent that they'll take over the world and exterminate the human race for being inefficient. My point is, why do these futuristic clods build the machines to be incredibly intelligent then?

Don't they see the potential danger if their super-duper ST5000 (or whatever) is wired into every defence system on the planet? Anything could happen. One slip, and it could doom mankind. One of the system operators could inadver-

tently leave a copy of "You Got An Ology?" lying on a table, and then everybody would be in a pickle.

Anyway, in *Cybercon 3* the computer has been built, the systems wired up and the book left behind, and Operation Pretty Pickle is go. As *The Volunteer* it's up to you to nobble the computer and save what's left of the world with the aid of a big metal suit.

Verdict

What we've got here is a 3D-filled walky-talky puzzley-shooty game (to use the technical term). You have to penetrate *Cybercon's* defences (naturally increasingly deadly) and blow up its brain, on



Following years of abuse at the hands of inebriated students, the traffic cones strike back.

the way opening various locked doors, picking up various objects and solving various puzzles (usually involving the various doors and/or various objects).

The main problem with *Cybercon 3* is that we've seen it all before (or, considering its age, seen it all again since). The graphics are suitably fast, the sound is suitably creepy, the puzzles are suitably tricky and the defence robots are suitable blasts. But there's nothing that really leaps out and grabs the attention. You walk around a bit, find a puzzle, defeat some robots and get killed. Then you try again but get slightly further. And so on. There are some really good ideas - for one thing, you can jump, which is a novelty - but the gameplay isn't quite "there." The odds seem stacked rather heavily against you from the start, and the clumsy control method (with loads of inertia and supplementary keyboard controls) begins to grate after you've crashed into a doorway while trying to escape from a guard and simulta-



Give my creation life! Oh, go on.

neously access one of your systems for the sixth time in a row.

Cybercon 3 has much to recommend it. It's very big, very smart and thankfully comes on a single disk, but I found it curiously uninvolved. When you get beaten by certain puzzle, that "I'll get you next time" feeling just isn't there.

JONATHAN NASH

Cybercon 3

ETBA US Gold
021 6225 3366

Highs

Zippy 3D. High on atmosphere. A host of puzzles (and things to shoot.)

Lows

But it's very pleasant and exciting.



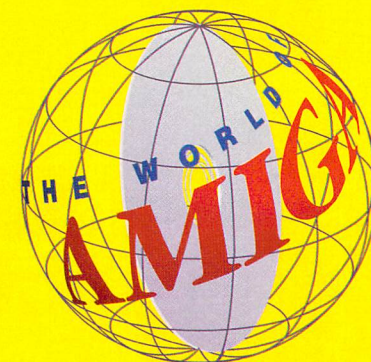
**Get your
head
around
this →**



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live all day
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The second
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Entertainment
Show**

SEGA



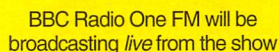
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The logo is circular with a yellow background. The top arc contains the text "21st ENTERTAINMENT • COMPUTER" in black. The bottom arc contains the text "INTERNATIONAL CHAMPIONSHIP" in black. In the center, the word "PINBALL" is written in a large, bold, black, sans-serif font. Above and below the word "PINBALL" are stylized pinball machine bumpers, each consisting of a red central triangle and four blue outer triangles.

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"Feel lucky, punk? Go ahead, make my day." "I've got some hints, tips and cheats for your ST games." "Oh, that'll do." Rob "Dirty Harry" Mead escapes by the skin of his teeth, again

MAGIC POCKETS RENEGADE

Chris Garrod of Worthing, Sussex has sent in a rather useful cheat for *Magic Pockets* which enables you to warp from world to world. Chris warns, you must warp early on the first level of each world or the transporter helmet disappears leaving you totally stranded. To warp from World One

CHAOS ENGINE RENEGADE

Thanks to everyone at Renegade for this great indispensable playing guide to one of this year's hottest shoot-'em-ups. Look out for the next part of the solution from Renegade in next month's ST FORMAT

The Navvie and the Thug are the two most powerful characters. They move slowly but have very powerful weapons and destructive special weapons, although they only get a few. They can take a lot of hits before being killed but are relatively stupid and not much use as computer-controlled characters

to start with. The Gentleman and the Preacher are relatively weak. They can only take a few hits but are very fast moving and intelligent. They get a wide range of useful special weapons. The Brigand and the Mercenary are the best all-round characters

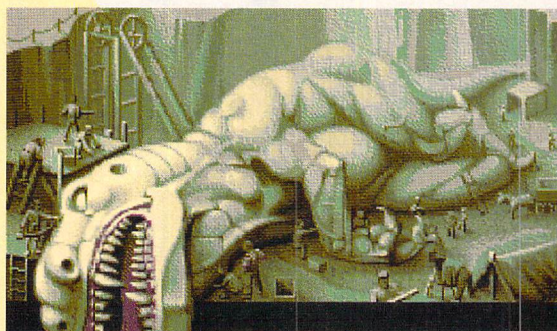
If you've never played *Chaos Engine* before you're better off selecting the Brigand or Mercenary as the human-controlled player (HCP) since they have the best balance of abilities. The Gentleman makes a very good computer-controlled player (CCP) since he's quick, intelligent and carries the Map as his special ability - very

handy for the first-time player. The Preacher is also very good as the CCP and he carries the first-aid kit which allows the HCP to heal himself, handy if you keep being shot. If you're a more experienced player, try the Navvie as the HCP - he is a very strong character who has a very powerful, easy-to-use weapon and a very destructive special weapon - dynamite. However, he does move slowly and can find it difficult to get out of the way of fast moving shots.

One-player game

In a one-player game all the money collected is automatically split 50/50 between the HCP and the CCP, so you don't have to worry about who shoots which things during play. If the CCP dies you have to pay for him to be resurrected, so it's in your interest to share out power-ups and such things as fairly as possible. In the game, the CCP's actions can be influenced by the HCP. It is important to realise that the CCP cannot see through the HCP, so can't run for things if you're blocking his line

■ Dinosours of Rock, Part 12: Tyrannosaurus Rex. A loincloth splittingly terrifying monster, characterised by orange loon pants and skinny-rib jumpers.



Choose your character, choose your fate

There are six characters to choose from:

Character	Cost	Weapon	Specials
Brigand	2,750	Rifle	Shot Burst, Molotov, Attract
Mercenary	2,750	Gatling	Bomb, Mines, First Aid
Gentleman	2,500	Flamer	Map, Attract, Repellent, Party
Navvie	3,000	Cannon	Dynamite, Shot Burst,
Thug	3,000	Shotgun	Molotov, Air Burst
Preacher	2,500	Lightning	First Aid, Map, Shield, Freeze

Any money that is left over can be spent in the first equipment screen, improving that character. Each character has a different weapon which changes in a different manner when it is powered up:

Character	Weapon	Start Damage	Maximum Damage	Maximum Bullets	Through Monsters?
Brigand	Rifle	7	36	4	Sometimes
Mercenary	Gatling	6	36	6	Never
Gentleman	Flamer	5	30	2	Always
Navvie	Cannon	8	44	4	Sometimes
Thug	Shotgun	8	49	7	Never
Preacher	Lightning	6	27	1	Always

Note: Maximum Damage is the combined damage for the weapon. For example, the lightning does all 27 points of damage with its one bullet while the shotgun fires seven bullets which do seven points of damage each.



BRIGAND



MERCENARY



GENTLEMAN



NAVVIE



THUG



PREACHER



■ Lickle Billy shows the baddies who's boss in the Bitmaps' corking platformer *Magic Pockets*.

to World Two you must first produce a transporter helmet in the first level of World One (Caves). To do this you have to collect one silver star and one gold star. Then you must kill enough nasties so the next one you catch gives you another silver star. Now enter the secret room – via the transporter helmet – and catch the bat to collect the a third silver star, followed

by the gold star for another transporter helmet – use this helmet to warp to World Two.

To warp from World Two to world three you must again kill enough nasties to be given a gold star when you catch the next. Enter the secret room again – via the transporter – and catch the nasty inside. Make sure that you collect the silver star on the floor before

the gold one to get a further transporter helmet to give you a warp from World Three to World Four.

In Level One, of World Three, you must find the diving helmet and search the pools until you find a cavern containing a transporter helmet and a chalice. Collect the chalice, then use the transporter to warp to World Four.

■ Maybe installing a DIY alarm kit wasn't such a good idea after all.

of sight. If he has nothing better to do, the CCP gets behind the HCP. By a combination of moving and turning round it is possible to affect what the CCP sees and does. The CCP only moves towards food if he has less energy than the HCP. However, he can collect food if he runs over it on his way to something else. The same is true of extra lives. The CCP doesn't collect any object – no matter how much he needs it – if the object affects the map in some way or generates monsters.

Two-player game

In a two-player game, it's best to stay away from the edge of the screen until you know the game really well. The money is shared out based on what each of the characters does.

Nodes and keys are the most important things, so make sure you get as many of these as possible. The last node – the one which opens the exit – is the most important of all, since you get credited for opening the exit as well as activating the node. You are awarded points for collecting keys and activating nodes, as well as for shooting monsters. Points are also awarded to the first player out of the exit. In general, it is best to try to co-operate. Share out the power-ups and the special powers as evenly as possible and attempt to do an equal amount of work on each level. Decide which of you is

going to cover the rear and which is going to shoot the monsters up ahead, since it's no good both of you shooting at the same monster. It's a lot easier to progress if both of you are as powered up as possible.

General play

An extra life is awarded to either player, in either version of the game, for scoring a multiple of 7,000 points.

A novice player should use the map as much as possible – the Gentleman has it as his first special weapon. If you're not sure what a set of keys does, a quick glance at your map should help out. The first-aid kit belonging to the Preacher is handy to have at the beginning, so you can heal yourself. The Navvie's dynamite is also one of the best specials to have since it destroys all



■ "What are you shooting at me for?" "I'm trying to kill the baddies on the edge of the screen." "Idiot."



of the monsters on the screen – remember you have to wait for the fuse to burn so be careful. Silver keys are very important as they open up the main route to the exit or make vital items appear. You must try to collect all the silver keys on a level. gold keys open a secret room or bonus areas. Some of these can be difficult and are best avoided until you get used to the game. If a level has more than one exit, it's to your advantage to go out of the higher lettered exit. If you hear "Exit Open,"

■ Watch out for the hands in World Two. They move fast and are very hard to kill.

but the node counter indicates there are nodes still to activate, try to find the extra nodes and then find the higher exit. These exits take you to bonus sections and secret areas on the next level.

In the earlier levels of the game, areas you complete are sealed off. Don't worry about trying to backtrack into them, you've done all you can, push on towards the exit. The music also gives you a clue as to how you are progressing – it picks up in pace as you near the exit but becomes subdued if you go back into an area which you have cleared out. The music also become more pacy in difficult areas infested with lots of monsters, but becomes more relaxed in regions where a bit more thought is required. Passwords are awarded at

the end of every world – these record your characters' status as well as their current position, including the number of lives they have left – you can be better off entering an old password or even starting again from the beginning to be in a stronger position with more lives at the start of the world.

While you're playing the game keep an eye out for background detail. Look out for shadows that don't look quite right and things out of place – rock pillars with faces on, a tell-tale geometric pattern of stones or something appearing on the edge of the screen. Things are not always as they seem, so don't be afraid to experiment, you can't hurt yourself. Make sure you quickly collect as much money as possible since the coins the monsters leave behind disappear if left for too long.

Equipping a character

Cash can be spent in the Equip-ment screens to improve a character's statistics. Make sure a character's skill level is kept as high as possible, since this controls his current maximums for all his other statistics and dictates how many weapon power-ups and special abilities are available for purchase. Try to keep his level of weapon power-up as high as possible and then you can spend any money left over on extra lives, if you have enough. Intelligence is very important for computer-controlled characters because it controls how well they play the game, so buy it for them whenever you can.



■ Death, mayhem and destruction are yours for the asking. Welcome to *The Chaos Engine*.



ELVIRA 2: THE JAWS OF CERBERUS ACCOLADE

Fret no longer. Edinburgh's Jaz McGovern has sent in the complete solution for this rather sexy graphic adventure and wins himself £25. This month you get to meet Frankenstein and throw Ice Darts at a Yeti. There is more Elvira next month with Part Two – the Conclusion

Start of game - Outside gates

Over by the billboard, get the shamrock. It's the first move and you can't complete the game without it. Turn around. To the left of the walk, pick up the rock. Go to the guard's house on the right of the screen. Throw the rock through the window and enter. Take the guard's uniform – really a protective vest – and get the keys. Press a button on the computer terminal to see which movie studio contains the ending. Take all the papers from the bulletin board, especially the pin-up calendar. Put on the guard's jacket. Enter security code to open the studio gates.

Exit from the hut and go through the open gate to the parking lot. Look at Elvira's car. Open the trunk by clicking on the lock. Open the case in the trunk and get the wire-cutters and wrench. Turn to the left and enter through the doors into the studio.

In the lobby you can look at everything including Elvira's notebook. Checking things out adds to your experience points even if you don't need the items.

Go to the elevators to the right of the double doors and push, then enter the code for the elevator – you do have the revised version of the game with the new set of codes, don't you? Enter the elevator, turn around and push the button for the second floor. Get



■ "Cor, I don't half fancy some grub..." "I'm a grub, I bet you don't fancy me." "I do, you've got great mandibles." "Ooh, you've made me go all slimy."

off, turn right, right again and enter the first door on the right of the corridor.

This is the computer room. Grab the book on the far side. The next room on the right is for make-up. Get the mirror from the wastebasket from the left side. Get the make-up case at the second mirror from the left.

Exit the room and go to the next room on the right hand side of the corridor. This is the dressing room. Collect the nail file, news paper and tissues, towel, popcorn, three cans of hairspray, the silver clover charm, curling iron and make-up case.

The door at the extreme end of the corridor is the typing pool. Take the disk from the box of floppies and the boom box. Going back down the corridor, the next room on your

right is the dressing room. Get the spirits and seltzer spritzer on the book shelf.

Next room on the right down the corridor is the costume department. Pass this by for now as you don't have enough power points and spells to enter yet.

The last room back down the corridor is the canteen. Get the cupcakes in the case and a can of soda. Go back to the elevator, enter and press B for basement. Exit from the elevator and make two right turns.

Move up to the Indian and you can start to talk to him. Ask him questions about Elvira and what you have to do. Just don't make any jokes about firewater or scalps if you ever want to talk to him again.

Turn around and, on the way back to the elevators, take the matches and clorox bottle from the janitor's closet on the right. Go back to the first floor and take the fire extinguisher from the wall. You can also enter the bathrooms and tinkle and wash your hands if you have to. It has nothing to do with the game, however.

Now you're ready to start casting spells. You've got a lot of stuff and it weighs a lot. Spells weigh nothing.

Cast the following spells:

Protection – use the soda can
Breathe Underwater – three of them using the popcorn, gum and the cupcakes.

Healing Hands

Luck (the four-leaf clover)

Ice Darts

Unseen Shield

Enter Stage Two elevator – the one



■ Despite extensive plastic surgery, Edwin couldn't disguise the fact that he was hideously ugly.

with the big "2" on its entrance. When you enter the stage area, put down the wallet, computer disk, wrench, mirror, hairspray, towel and seltzer bottle. Turn left, go through the doors.

You're now in the living room of the haunted house. Take the helmet and the left gauntlet from the suit of armour on the right. Don't put anything on just yet. Suits of armour guard the entrance to the study. Enter and, on the inside, there's a desk on the left. Open the drawers and take the prayer book and use it to mix an Unholy Barrier spell. Also take the padlock. On the right there's a fish tank with some piranhas. Don't touch it.

Go back to the living room and take the antique vase from the corner shelf. Turn it into a Detect Trap spell. The bucket next to the fireplace, is used to cast another Protection spell. The door, right of the fireplace, leads to a library, you go this way later and get past the poltergeist by dropping kids' toys from the bedroom upstairs.

Go to the entrance and go up the right side of the staircase. At the top make a right. Go left at the main hall and left again into the first doorway.

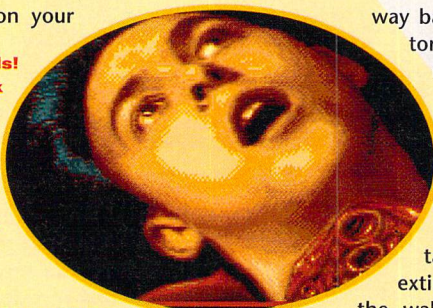
You're inside the nursery. Take the blocks. Go back downstairs to the living room. Stand two paces back from the library door and place a block on the floor. When the poltergeist goes for the toy, run past him into the library.

You can't check any book out of the library, but keep note of any books which seem useful to you. You need these written clues later. Look carefully at what people use as bookmarks.

Go through the living room, back to the entrance and straight ahead to the door on the far wall. Add kids' toys to your inventory as you pass through the entrance. Turn the seltzer bottle into a Detect Trap spell.

In the dining room, take all you can. You should be hungry

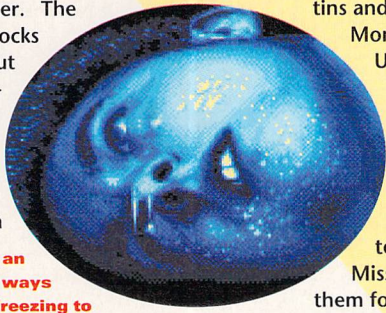
■ "Cowards! Come back and I'll bite your legs off... I've still got me own teeth y'know."



■ "My mother said to me, 'Son, if you want to get a hat, get a head,' so I chopped her bonce off and sold it to a restaurant for a pork pie and a fedora."

now. Turn the wine into the Courage spell, glasses turn into Detect Trap spells. Stay away from the service window until you've taken everything. If you look in the window, you end up in the meat locker freezing your patties off.

Pull the boots off the biker – they're foot armour. Pick up the meat and cheese from the freezer shelf. The wine bottle can be turned into another Courage spell. Leave behind your keys and pen – they freeze and can be used for another spell later. The freezer door locks automatically. Put on the boots, helmet, jacket and gauntlet. Get out the knife. Cast an Unseen Shield spell and a



■ There is an infinite variety of ways to die in *Elvira 2*. Freezing to death is just one of them.

Luck spell. Build some more Ice Darts and save the game. Now the fun begins...

Use the curling iron to heat up the thermostat. When the alarm goes off, a ghoul arrives. Fire the Ice Darts and back away. When he dies go through the open door.

Turn right, go downstairs and turn left at the bottom. Straight ahead is the lab. Take the yellow flask, bleach, heart, skin, all the test tubes you can find and the brain in the jar on the left wall. Turn the brain into a Turn Undead spell and go upstairs. The door on the right – across from the meat locker – leads into the kitchen for more food.

Fight the zombie in the hallway between the kitchen and the entrance. Now go into the kitchen and drop everything. Put on the armour, go into the hall, turn left and immediately cast a Turn Undead spell. If you start to faint cast a Courage spell. Warning – it's as bad as hearing Rosanne Arnold sing the *Star Spangled Banner*.

Make a Brainboost spell and the following spells:

■ "Oi Geronimo, bet you've scratched a few heads in your time, eh? Eh? Got any firewater then, eh?" The Indian frowned for a moment then reached for his tomahawk.



Revive – use the cheese from the meat lockers and bleach from the basement.

Telekinesis – use the magnet from the boom box.

Glue – use the tube of adhesive in the yellow tin on the kitchen shelf.

Protection – use the bucket.

Fireballs – use newspapers, tissue, calendar, postcard and papers from the security hut.

Two Detect Trap spells – use the glass jar on the kitchen shelf.

Magic Missiles – use pots, pans, tins and knives.

More Ice Darts.

Unseen Shields.

Two Healing Hands.

Keep the meat cleaver as a weapon. Don't use the wire-cutters for Magic Missiles, but keep them for later. Return to

the entrance and drop off any extra items in a junk pile, after cleaning out the kitchen. Do keep the crucifix.

The pile should now include:

Candelabra

Place settings

Three cans of hairspray

Egg basket from the kitchen

All the lab stuff

Mirror

Gin and vodka bottles

Padlock

Computer book

Towel

Shank of meat from the freezer

Go upstairs. The left staircase takes you to the bathroom door. Inside, take the sponge and towel. Leave the bathroom, go right and towards the main hall. The door in front is the Lavender Bedroom. Enter and put on the armour, beef up your magic muscles and pull down the sheet. Use Ice Darts to finish your enemy and pick up the script which falls. Pick up the pictures which fall on the floor.

Look for the red button under the bed. Push it in and a secret room behind the bed opens up. Grab the chalice and the ten can-

■ "Need any pan scourers? How about a vegetable knife, then?" How Daphne hated door to door salesmen.



dles from the altar, then leave. Turn two lucky cats on the bedroom mantle into Luck spells. Leave the bedroom, turn right and stop before the second door on the right. Put on your armour, invoke a Courage spell and step inside. When you regain consciousness, take the pillow and tuning fork off the bed.

Across the hall is the nursery you saw earlier. Find your pile of junk and leave the pillow, towel, chalice and sponge behind.

Go back to the studio offices in the basement. Get the fire extinguisher from the wall and the medicine bag off the back of the boiler room door. Enter the boiler room and turn around. Take the copper rod off the leg of the left boiler. Get rid of the Yeti by unleashing a couple of fireballs.

Upstairs, get ready for the costume room. Put on the armour, take the meat cleaver, cast and Unseen Shield spell and go berserk. You dispatch the witch and turn her eyeball into a Fear spell.

The light switch is on the wall behind you. Get the wizard's robe, white lab coat and sword from the Sir Walter Raleigh costume. Go to the make-up room.

Check the six pictures from the Lavender Bedroom and find the one which looks like a sorcerer's apprentice. Working with the mirror, stuff in make-up case and wigs on the shelf, make up your disguise to match the picture. Take off the disguise and place in your pocket for later use. Find the picture which looks like a geeky lab assistant, make a disguise like it with the lab coat, the wig on the lower shelf of the costume room and items from the make-up case – moustache, half glasses, eyebrows and false teeth. Once your look is in place, raid the other offices for paper supplies.

Head for Studio Two and get the extinguisher from the lobby. In the entrance of the haunted house

add the wizard's disguise and the fire extinguisher to the junk pile. Turn down the hallway which runs left of the dining room and right into the kitchen. Turn left into the dingy hallway and left again down the stairs.

Check out the disguise, enter the office – entry is on the right. Dr Frankenstein is busy. You can offer to help him. In return he whips you up a batch of poison – make sure you have the poison formula you found in the library. Leave with the poison.

Back in the entrance, remove the costume and use the poison on



■ This old witch poses no problems. Simply pop her off with a quick flick of your trusty penknife.

the shank of meat. Go to the study. The piranha in the study thinks the meat's a treat and you can retrieve the key from the bottom of the fishtank. The key opens a safe in the wall hidden behind the duck picture. Inside the safe is the chief's peace pipe.

Go back upstairs, then turn right at the main hallway and take the staircase to the far end of the attic. You must use the tuning fork immediately. This causes the skylight to shatter and it also kills the vampire.

Go back downstairs and stop in the first door on your left. Get the book of matches out of one of the tea chests. Move the ladder back up to the attic and use it to climb up onto the roof. Stick the copper rod you found in the basement onto the side of the chimney. Go back downstairs as the storm gathers... now all you've got to do is wait for Part Two.

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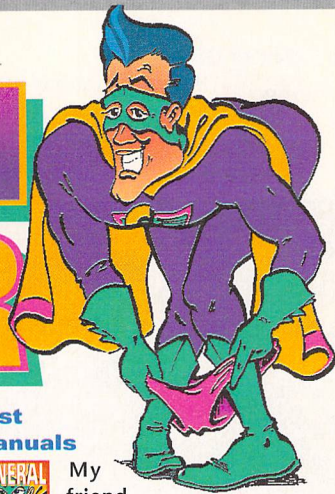
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Drafted Lemmings



Why won't *Lemmings 2* work on my STFM? I've got 1MByte of RAM and a double-sided disk drive. Nothing happens when I boot up the game and when I press the reset button I get the VJS design icon, then a series of moving vertical red and black blocks.

David Howell, Potters Bar



■ "I really don't want to play follow-the-leader any more." "I don't want to play follow-the-leader any more." "Stop copying me!" "Stop copying me." "I give up."

CB: I phoned Psygnosis about this and they say they haven't experienced any problems with the game software. The best thing you can do is phone their Customer Services Unit on ☎ 051 709 5755 and they'll be happy to discuss your problem with you.

Sleepwalker - Ocean



I have bought *Sleepwalker* for my Atari 1040STE. After playing it I was pleased with my pur-

chase, but a bit disappointed by the sound effects. I loaded it a week or so later and suddenly I had speech on the introduction screen and some extra sound effects. Ever since then I can't get the sound effects again. Is the problem with my ST or the game?

Jonathan Cockley, Cambridge

CB: Ocean suggest you turn off your STE for a full 30 seconds before booting up the game to clear the memory of any unnecessary data. The game should then work properly. If you still have problems, it could be your STE which is at fault, rather than the game. You can always give Ocean's technical department a ring on ☎ 061 832 6633 just in case.

Beast cheat



Have you got a cheat for *Shadow of the Beast*?

Matthew Cartwright, Dyfed, Wales

CB: Hold down the <Left Shift>, then press <Enter> and <0> on the numeric keypad. Release them and press <F5>. Your energy is now boosted to 30 units.

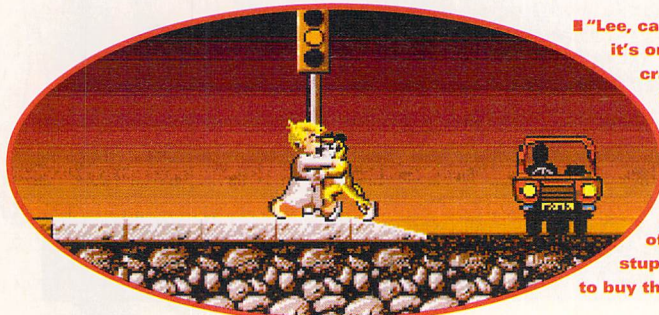
Desktop rubbishing



I bought a copy of *Speedball* for my son after Christmas, but now when he tries to load it all he gets is the Desktop. What's wrong? Can you help?

Margaret Glennester, Bucks

■ "Lee, calm down, it's only a crappy Reliant Robin." "I know. I just want to see what kind of people are stupid enough to buy them."



CB: Sounds like the disk is corrupt to me. Your best bet is to either take the game back to the shop where you bought it and exchange it for another copy or send it back to the manufacturers.

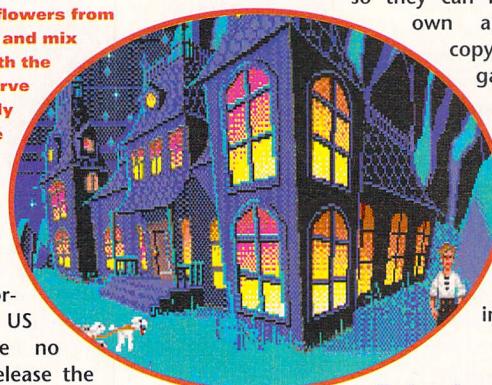
Le Chuck's revenge



Can you tell me if *Monkey Island 2* will ever be released for the ST?

Everyone, the World

■ Get the flowers from the forest and mix them with the meat to serve a deadly meal to the piranha poodles in *Monkey Island*.



CB: Unfortunately, US Gold have no plans to release the game on the ST. The main reason is that Lucasfilm – the company responsible for developing the game – no longer supports the ST. The other factor preventing its release is that each copy of the game would need at least 11 disks – that's a lot of disk swaps for owners of 0.5MByte machines.

PC or not PC



Can I use an emulator like PC Speed to play PC games on my 1040STFM? If not, are there any other programs which would work?

Douglas Cowan, Glasgow

CB: No. PC Speed is primarily aimed for use with business software and couldn't possibly cope with all the complex graphics and animation required for an ST game. In fact, there are no emulators you can buy which are capable of working with games software. Sorry I can't be of more help.

Lost manuals



My friend has lost my *Monkey Island* game instructions. How can I get some more?

Philip Clifford, Lanarkshire

CB: Write to US Gold's Customer Services Department at Unit 2/3, Holford Way, Holford, Birmingham B6 7AX explaining your problem. They'll be more than happy to provide you with new instructions provided you enclose a proof of purchase – a proper receipt or even your copy of *Monkey Island* itself – so they can be sure you own a legitimate copy of the game and not a pirated version. Phone US Gold on ☎ 021 625 3366 if you need any more information.

Robocheat



Have you got a cheat for *Robocop 3*?

Daniel Gibson, Beds

CB: Pause the game, hold down <Shift> and type THE DIDY MEN. Unpause and press <Esc> to skip to the next level. Does anyone have a complete solution? Send it in and you could win yourself £25.



■ "Robo, honey, do you think you could try not to kill anyone at the delicatessen counter this week?"

Act of God



Have you got any cheats for *Populous*?

S J Hewitt, Slough



Are you having trouble defeating your enemies in *Populous*? Captain Blunder lends a helping hand.

CB: No, but I have got some level codes. Here they are...

Level	Code	Terrain Type
0.	genesis	grass
3.	timuslug	grass
5.	swaver	desert
10.	moringil	lice
14.	weavhipham	ice
18.	hobdietory	rock
23.	sadwillow	ice
26.	verymeend	rock
31.	dousick	grass
36.	calozboy	desert
41.	burmpall	ice
44.	bilador	ice
53.	coroport	grass
59.	mingbdon	ice
63.	douperbar	rock
69.	scomphill	desert
73.	burgbord	desert
78.	weaveaed	grass
84.	shadkopen	ice
88.	lowinlow	rock
94.	suzogoboy	desert

Lair of the Goblin



Help! I'm completely stuck at the Castle in *Goblins 2* where a blacksmith asks me to get him an



Meanwhile, round at Vival Zart's house, Winkle has just used his worm on the vulture. Or did the vulture use his winkle on the worm? Can't remember.

imprint and a bit of metal to forge a key - I can get the imprint, but I can't find the metal. What do I do?

Kirsty McCullough, Glasgow

CB: You have to get Winkle to collect the sword from the Guard's room, then return and give it to the blacksmith.

Sticky fingers



My two darling daughters have so far ruined three of my games by pulling the protective disk covers back and sticking their fingers on the disk inside. With games costing £10 - £40 I need to do something apart from chopping off their fingers. I know you don't like to encourage the practice, but is there any way of backing up my game disks so my daughters don't ruin them?

P N Saxty, Luton,

CB: Not only does *ST FORMAT* disprove of copying games disks, it's actually illegal and makes you liable for prosecution by the copyright holders. There's also no totally fail safe method of backing up your game disks and you could even end up damaging the data anyway. Buy your daughters some mittens.

Player problems



I have a problem with *Player Manager*. The disk boots up OK, but once I've selected my players and started the match, it doesn't let me play - my ST plays for me.

Once the match is over and the Week Two screen appears, letters appear in the top left corner and everything just stops working. I've had two replacements, but it just does the same on every one.

Daniel Wetzels, Hertfordshire

CB: Anco (0322 292518) report no problems with the software and suggest the fault lies with your ST. Unfortunately, they weren't prepared to be any more helpful than that. So much for customer relations, eh? Can anyone else help?

Street cheatin' fights



Please could you tell me a cheat for *Street Fighter 2* so Player One and Player Two can be any of the master fighters - Balrog, Vega, Sagat or M Bison?

Stephen Jackson, Yorkshire



Dhalsim had blown it. The only woman he ever loved turned into a ball of flame by a breathy kiss. Moral: never eat onion bhajis at parties.

CB: US Gold (021 625 3366) assure us that there are no cheats which can enable you to play the boss characters in *SF2*.

0.5MByte swap



I have a copy of *Populous 2*, but it is the 0.5MByte version. Do you know whether Bullfrog would

be willing to exchange it for the 1MByte version?

Andrew Bright, Cheshire

CB: Send your copy of *Populous 2* back to Electronic Arts, 90 Heron Drive, Langley, Berkshire SL3 5XP for your upgrade.

Bolt from the blue



Have you got any cheats for *Operation Thunderbolt* as I can't quite get past Level Two?

Ismail Bhana, Surrey

CB: Get on to the High Score table and type your name in as WIGAN NINJA. You now have infinite lives. To use the laser sights all the time press <F8>, <F7>, <F6>, <F5>, <F4>, <F3> and <F8> in that order. Now press <F1> three times for a One Player game or <F2> for a Two Player game.

Mysterious east



I've been trying to find a game called *Oriental Games* which was reviewed in *STF* 10. Can you help?

Hugh Fogell, Shrewsbury

CB: *Oriental Games* is now available on US Gold's Kixx label, price £9.99 call 021 625 3366 for more details.

Pile driver



I can't do Zangieff's Spinning Pile Driver. Can you help me?

Rhys Hopkins, Gwent

CB: Move your joystick Diagonal Down, Diagonal Down (other way) and press <Fire>.

We printed a complete guide to the *Street Fighter 2* moves in *STF* 47 - turn to page 50 to order your copy if you missed it.



Help us to help you

Captain Blunder's only glad to help with all your gaming problems, but unfortunately he hasn't the time to reply personally - please don't send SAEs expecting a reply, all questions are answered via the pages of *ST FORMAT*. Some readers have also started sending their faulty game disks in. Please don't. If there's a problem with your disks send them back to the software house or retailer you bought them from. We are not liable for games you send to us and cannot promise to return them.

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COMMUNICATIONS

- C. 7 VANTERM V.4: Excellent multi-function comms program.
- C. 11 BBS: Three BBS systems - Citadel, Starnet and Mini-BBS.

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ART

JPEG COMPRESSED PICS

FLOPPYSHOP
DISK PIC.3779 AND PIC.3780

These disks feature 24 different pictures which you can edit in *True Paint* or load into any other Falcon program which utilizes JPEG compression – an industry standard image compression program.

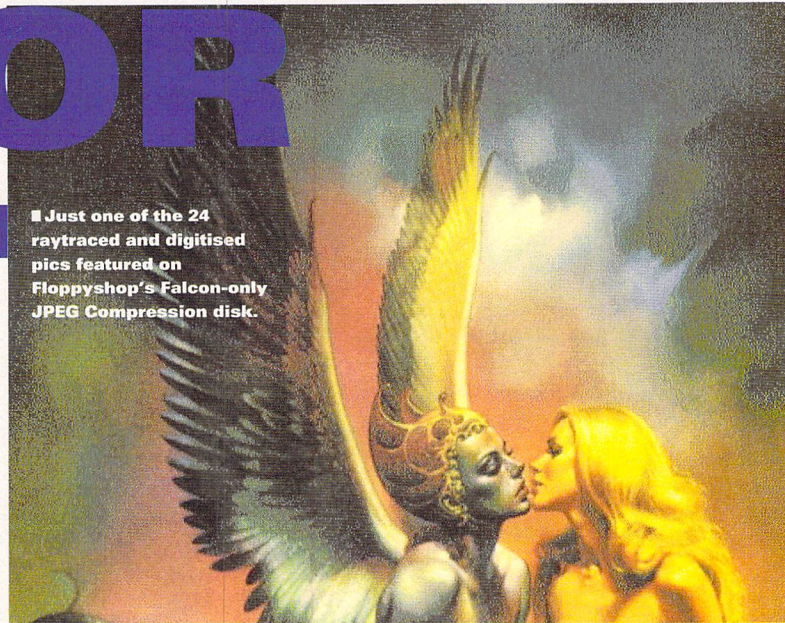
The pictures consist of high-quality digitised and raytraced images

of people, animals and objects which you can also display with the supplied viewer utility – the disk also includes a copy of the JPEG compression software enabling you to store your own pictures.

PEG compression works by storing a copy of the image, rather than the actual picture. This means you can fit more images onto a standard floppy, but you do lose picture quality every time you load them up.

STF RATING: 84%

■ Just one of the 24 raytraced and digitised pics featured on Floppyshop's Falcon-only JPEG Compression disk.



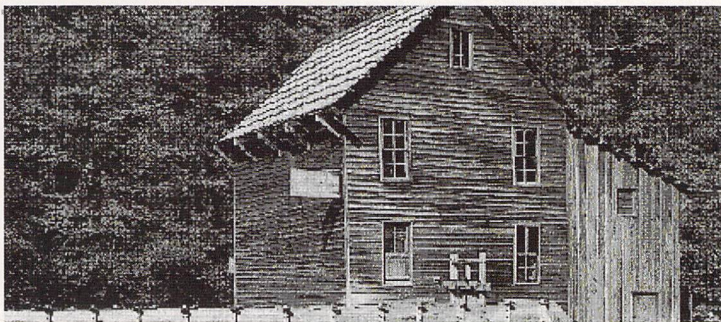
GIP GOODMANS INTERNATIONAL DISK GD1973

The *Greyscale Image Processor* is a graphics utility for the ST, TT and Falcon which works exclusively with 256 colour greyscales, making it ideal for DTP applications. *GIP* works in any

■ If you're at all interested in desktop publishing you need to get your hands on a copy of *GIP*.

resolution and enables you to work with a wide variety of picture formats including TIFF, GIF and *Degas Elite*. You can even import colour pictures as the program converts them into greyscales automatically. Ideal for smartening up scanned pictures and enables you to fiddle around with a variety of image parameters and includes two filter utilities.

STF RATING: 83%



FALCON UTILITIES



GEM-VIEW 2.24 ST CLUB DISK GRA.158

GEM-View is the best picture converter and displayer available for the ST, TT and Falcon030, the current version in PD libraries is 2.24 but an improved version 2.3 is already available for downloading from many BBSs and includes full English documentation.

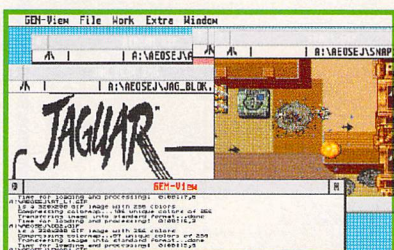
Although *GEM-View* is Shareware, it has many features and abilities not found in professional graphics utilities. Among the 28 different picture formats supported are

TIFF, JPEG, GIF, *Spectrum 512*, Targa, MacPaint, OS/2 Bitmaps, PCX and MS-Windows Bitmap files. Another excellent function is the ability to convert GEM vector graphic metafiles to bitmapped faster graphics and use GDOS fonts. *GEM-View* works in any resolution on any TOS-based machine and although you can only view dithered images in ST resolutions, you can load and convert pictures in memory to swap between formats. *GEM-View* is fully MultiTOS compatible and uses its own customised interface. The log window displays information on the file currently being processed, with details of the file type, size, number of colours and so on.

GEM-View is a brilliant utility recommended to anyone with an interest in colour graphics. If you use it then register with the author.

STF RATING: 92%

■ It's the most versatile graphics program around, details of the Jaguar picture files being displayed are shown in the log window.



SPEED OF LIGHT 2.6 GOODMAN INTERNATIONAL DISKS GF26/GF27

Speed of Light is another Shareware graphics utility enabling 256 colour GIF pictures to be viewed on ordinary 16 colour ST systems. The latest version of the program is supplied on a couple of Goodman International's Falcon disks called Space Disk 1 and Space Disk 2, along with 19 digitised space related images from NASA. Pic-

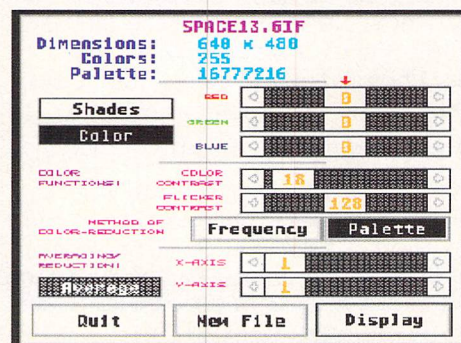
tures are loaded and uncompressed impressively quickly and all GIF formats are supported, there are several different versions of GIF file about. On lower resolution systems 256 colour pictures are displayed in "flicker mode" to enable them to be viewed, pressing the <S> key saves the current picture in *Degas* format.

Generally, *Speed of Light* displays GIF images well with several useful functions enabling pictures to be enhanced for better viewing.

The quality of the space images supplied with the program makes *Speed of Light* a very attractive package indeed.

STF RATING: 76%

■ Plenty of functions to play with in the *Speed of Light* viewer. You can view pictures as greyscale or colour images, adjust contrast, flicker rate and RGB values to obtain the best results.



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You command the German army through intelligent army commanders against a computer opponent, developed over ten years, that commands the Russian army as competently as a human player.

Easy to use interface produces a fast paced game with the need to change army orders only when the player deems necessary. Written by Ken Wright, the most prolific author of strategy war games.

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EDUCATION

FRANGLAIS FLOPPYSHOP DISK EDU.3642C

If you've ever read Miles Kingdon's column in *Private Eye*, you're sure to be familiar with *Franglais*, an easy-to-understand, often humorous, mixture of French and English. Evelyn Mills has taken the concept behind *Franglais* and applied it to her own irreverent look at the French lan-

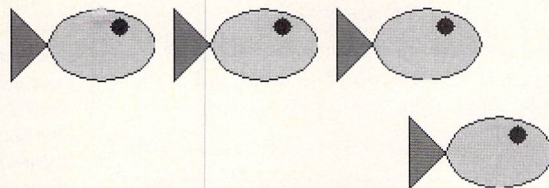
guage. This disk contains six different *Franglais* modules covering all aspects of French vocabulary from verbs to numbers, colours to nouns. It all adds up to a highly enjoyable package filled with witty drawings and practical examples of what the author is talking about.

If you've never studied French before, now's the time to start. *Franglais* is tremendous fun.

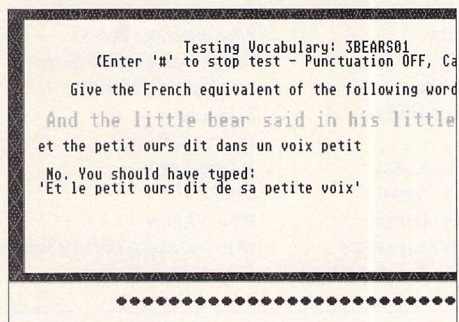
STF RATING: 87%

I WOULD LIKE UN POISSON NOW S.V.P.
TAKE UNE CHANCE ET PRESSEZ 'P' ?P
ESSAYEZ 'P' AGAIN ?P

BON ! COMBIEN DE FISH NOW ?QUATRE■



■ Brush up your French with Evelyn Mills' *Franglais* program and you could help prevent another North Sea Cod War.



■ Learning languages should be fun - there's not much evidence of it in *Workout*, a vocabulary tester for the ST.

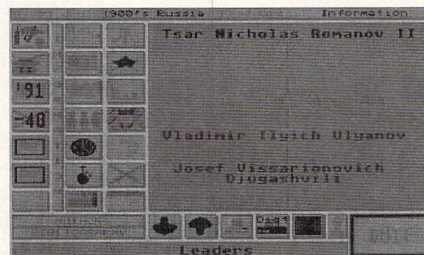
Bears word by word from French into English, then sit shame-faced while your ST tells you you've got it wrong. Sounds like hard work, doesn't it? It is, and to make matters more complicated you can also get your ST to check your punctuation and spelling too.

Unfortunately, *Workout* is daunting and unfulfilling when it should be fun. You can create your own vocabulary lists though.

STF RATING: 54%

WORKOUT ST CLUB DISK EDU.46

Where *Franglais* is fun, *Workout* is one tedious slog through page after page of French vocabulary tests. You have to translate the story of *The Three*



1900'S USSR ST CLUB DISK EDU.45

1900's USSR is an educational database of information about the former Soviet Union written by James Horsfall. There are maps, diagrams and statistics covering every aspect of Russian life from agriculture to the

■ 1900's USSR is a fascinating look at one of history's most important countries - it's a shame the database had to be in such disgusting colours.

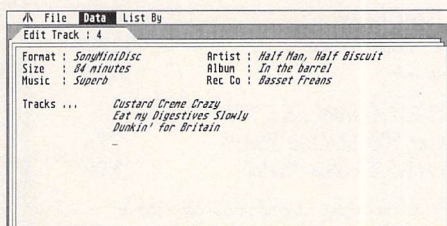
Cold War, sport to the 1991 Coup which culminated in Boris Yelstin's rise to power. Although this demo version of the program has some of its options disabled, it's still a useful and informative examination of one of the world's most powerful countries. The main database screen consists of a series of icons representing the different historical categories and is easy enough even for small children to use.

STF RATING: 51%

UTILITIES

RECBASE AQUILA PD DISK PL22

RecBase is a database designed for keeping track of all your records, tapes, CDs, DATs or DCCs in your music collection. Up to 200 items can be stored in each database file with details of music format, size, music, artist and publisher. Up to 16



tracks can be listed per record. Standard GEM menus are used for the options and data is displayed on a graphic representation of a record card. For anyone who gets stuck, the program features a built-in help system alongside a comprehensive manual on disk.

RecBase runs in high resolution only and runs in 512K - although 1MByte is recommended. It also runs on colour systems using a mono emulator.

STF RATING: 74%

■ It's easy listing all your fave records and discs with *RecBase*. It also enables you to make records of items you own.

FORMATTERS PD4U DISK U075

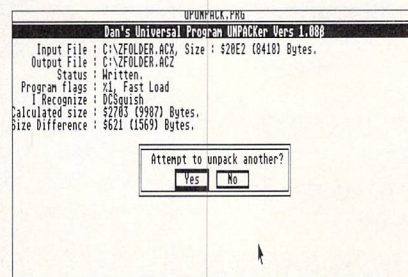
Even more floppy disk formatting programs in this collection, and the *Universal Program Unpacker* which unpacks a whole range of squashed formats. The unpacker works reason-

ably well and handles 13 different formats, it coped with every packed program file we tried including the files created with the *Happy Computer Packer*, *Pack-Ice*, *DCSquish* and *4Pak* programs.

The program doesn't use its own unpacking code, it searches for the unpacking routines built into the compressed file it is trying to unpack, if it finds a format it recognises it then prompts for a destination file to save the unpacked file. Good stuff.

STF RATING: 68%

■ One of our Cover Disk programs this month was compressed using *DCSquish*, it had no problems unsquishing it.



DEMOS

MORPH DEMO FLOPPYSHOP DISK DEM 3781

Remember the morphing sequence in Michael Jackson's *Black or White* vid where all the different dancers merged into each other? Well, Black Scorpion software have used a similar process on this Falcon-only demo. There are two Morph files on the disk,

the first runs in true colour mode on RGB monitors only, the second can be run on any monitor or TV at 50, 60 or 70Hz.

Each demo features one slightly hairy bloke and one very hairy bloke morphing their faces in a never ending loop. It's clever, it's slick and it's likely to make you very ill after about 30 seconds.

STF RATING: 66%



■ Black Scorpion's morph demo proves you don't have to spend millions on plastic surgery to get a new look. Try telling that to Wacko Jacko.

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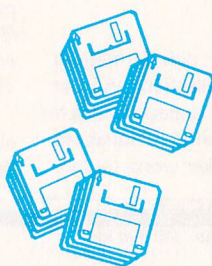
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Access



GAMES



GRANDAD 2: IN SEARCH OF SANDWICHES

CALEDONIA PDL
DISK GM184 AND GM 185

Grandad and the Quest for the Holy Vest was the best PD game last year. It had brilliant graphics, an original plot and more jokes than an episode of *French and Saunders*.

Well, *Grandad's* back, but this time he's swapped his wheelchair for a motortrike and zipped off down to the park for a good leer at all the young girlies. Sadly, the absent-minded tosspot has lost his sandwiches and it's your job to help him find them. The search for grandad's sarnies takes you all over the park and into Funland where the real adventure begins. This time there are plenty of weird and wonderful characters for you to meet including Jake the Caledonian Flasher and a very sadistic tourist. *Grandad* can be con-



■ "I'd like a screwball please, but you can knock of 20p 'cos I don't want the bubble gum." Why not? "I found me own in the Gent's toilet."

trolled by joystick or keyboard and the game features an Options menu which enables you to use different objects or save your current game.

The brilliant graphics and sound samples are let down a little by overly linear gameplay – which means you don't make any progress unless you collect objects in exactly the right order – but this is a minor consideration in what is otherwise a cracking game. *Grandad 2* also needs 1MByte of RAM to run.

STF RATING: 90%

BLOCKBUSTERS

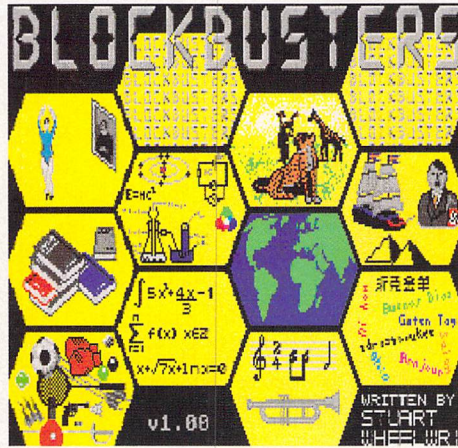
PD4U
DISK G189

This is the ST version of the quiz show it's OK to like. All you have to do is answer the general knowledge questions which flash up on the

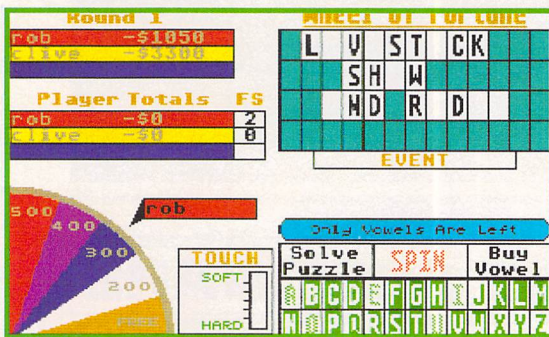
board. When you think you've got the answer you press a key and the answer is displayed. Your ST then asks you if you've got the answer right. Trusting, isn't it? Not much cop if you're playing on your own, but great for a few family rows when the full complement of three players

takes part. *Blockbusters* is simple to play and competently coded, but where's the Gold Run?

STF RATING: 81%



■ "I'll have a P please, Bob." "Oh, very funny. I bet you think I haven't heard that joke before. Well, here's a P-I-T-G." "Ow! What's that?" "A Punch In The Gob, you sarky git."



WHEEL OF FORTUNE 2

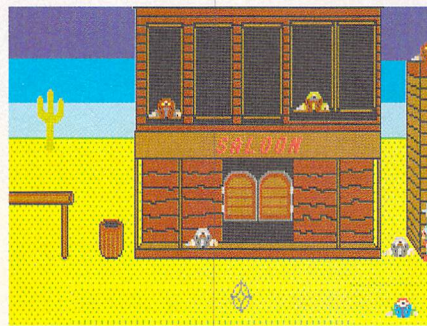
MERLIN PD
DISK MPD 1271

Come on down and strike it lucky in this fantabulous ST version of TV's most successful quiz show. Written in

■ From rags to riches, and back to rags again. Health, wealth and happiness with the spin of the wheel.

GFA Basic, *Wheel of Fortune* is really a posh version of *Hangman*. First you spin the wheel to see how much money you could win or lose, then you have to choose a letter to fill out the blanks in a mystery word or words. Beat your opponents and you compete against the clock in a bonus game with \$25,000 at stake. Graphically, the game's very basic, but it hardly matters, it's great fun to play and highly addictive to boot.

STF RATING: 80%



BEN WESTON GAMES

LAPD
DISK L.19

This compilation features three of Ben's games – *the Unmagnificent 15*, *Logic* and *Clan*. *The Unmagnificent 15* is a duck-shoot game where you

■ Clint heads for a final showdown with the Unmagnificent 15 in the Ben Weston's Games compilation.

have to kill the baddies before they get you. It's pretty simplistic, but worth a quick blast and features a chip music version of the theme to *The Good, the Bad and the Ugly*. Meanwhile, *Logic* enables you to turn your brain inside out by asking you five extremely tricky logic questions. Not for the intelligently-challenged. Finally, you have to help a gang of outlaws grow crops, defend their village and create medicines in *Clan*, a arbitrary, but addictive god game.

STF RATING: 77%

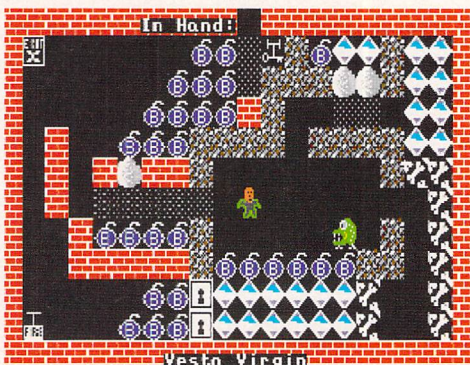
MAD MOLE

ST CLUB
DISK GAM.166

Written in STOS Basic, *Mad Mole* is a platforming romp through a series of levels, collecting diamonds and

avoiding baddies. If that's not enough for you, there are also plenty of falling rocks and bombs for you to contend with and heaps of puzzles to figure out. The game's based on the old *Boulder Dash* game and you're expected to complete each level against a time limit. The graphics are a bit childish and the scrolling's jerky, but this isn't a bad attempt at an arcade game and is well worth a couple of plays.

STF RATING: 59%



■ All together now "I am a mole and I live in a hole." Collect diamonds and avoid the nasties in *Mad Mole*, a STOS Basic arcade game.

MIDI-ZAP

LAPD
DISK G.297

Up to 14 human or computer-controlled players can take part in this *Asteroid*-style shoot-'em-up. Seven STs can be connected via MIDI and a further seven using RS232 ports.

Basically you get to fly around, avoiding asteroids and blasting the heck out of your opponents until there's only one player left. If you don't want a multi-player game, the disk also includes single-player demo. Sounds great, eh? Unfortunately, *Midi-zap* doesn't really live up to its potential largely thanks to some fid-



dly keyboard controls and sound effects. The graphics are reasonable, but there's just not enough gameplay here to hold your attention.

STF RATING: 45%

■ Blasting up to 14 of your pals to smithereens is the best bit about *Midi-Zap*, a space shoot-'em-up for STs and Falcons.

THE ST FORMAT PD DIRECTORY

■ Here's a list of where to go for all Public Domain software – demos, games and utilities for around £3 a disk! If you write to any of these libraries for a catalogue, enclose an SAE. Budget games are available from all PD libraries indicated by a (B). Simply mention the disk number (above the review) when you order the disk.

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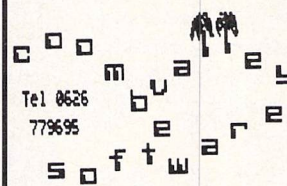
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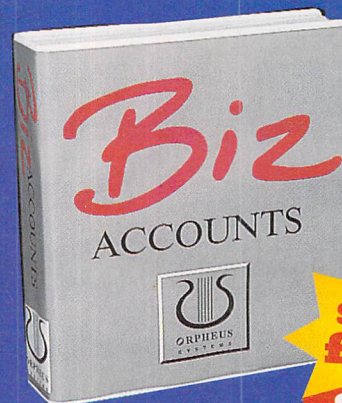
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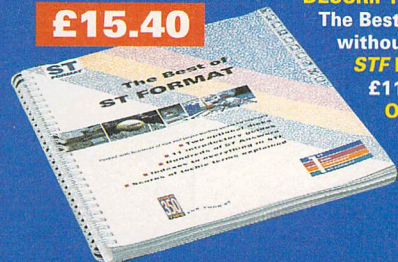
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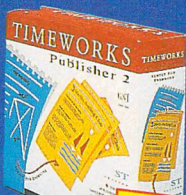
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Here we harvest the mass of independently distributed software and bring you the cream of the crop

There are hundreds of part-time programmers busy creating software for the ST in their spare time – they don't have to worry about deadlines, running over budget or sticking to a particular timetable. They write exactly what they want, when they want.

Because of this lack of regimentation some wonderful programs are developed which may well not otherwise exist. People develop programs because they see a need for them, largely because they want a program which doesn't already exist, to fulfill a specific need. Games, too, are a popular choice – the big softies are often reluctant to take on uncommissioned games and there's the chance of making more money if you market your program independently rather than just release it into the Public Domain.

The great thing is that much of this home developed software is of interest to everyone with an ST. That's the idea of the Indies section, we take the best independently produced software we can find and showcase it in the pages of *ST FORMAT* – we give everything an equal chance to shine, whether your baby's an art program, a game, a text editor or a business package.

If you think that your latest creation is worthy of review in *ST FORMAT*, pop it in a padded envelope and send it to us at Indie Reviews, *ST FORMAT*, 30 Monmouth Street, Bath BA1 2BW.

POWER CUT

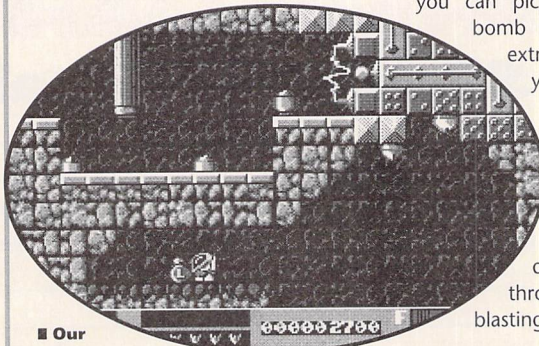
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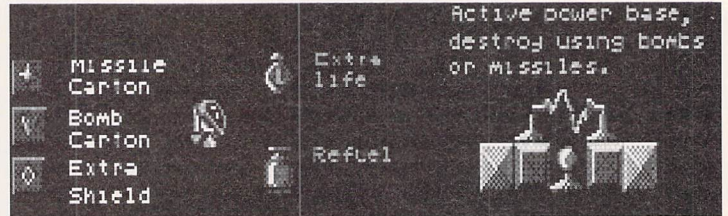
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Power Cut is a platform-and-caverns style game in which you guide a cute little droid and his handy jetpack around a series of caverns. Your mission is to destroy 25 power bases along the way and put the dangerously unstable power complex out of action. To make things even more difficult you've also got a strict time limit.

You are supplied with a tank full of jetpack fuel, some missiles, bombs and some shields. There are defences along the way that you



■ Our hero is just about to get an extra life as he wobbles off to destroy another unstable power base before his next tea break.



■ These are the power-ups you have to keep an eye out for when travelling through the caverns. It's easy to get stuck with no ammo in a dangerous area. The handsome chap in the orange helmet is your heroic droid.

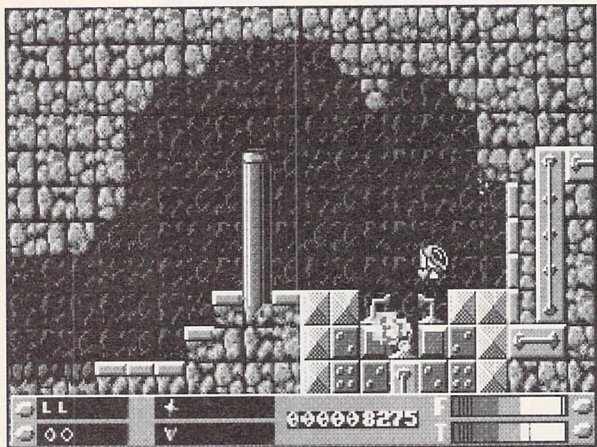
must either avoid or destroy. You can only carry a restricted number of items with you, so you've got to use your resources with care because they are quickly depleted if you use them indiscriminately. Take a few practice flights past the defences and study the launch patterns of the missiles and you can soon learn to avoid rather than destroy. Power-ups are available in five varieties en route; you can pick up missile cartons, bomb cartons, extra shields, extra lives and fuel for your jetpack.

Your joystick controlled hero is a bit on the sluggish side at first, but after a few practice games you're going to be ducking and weaving through the caverns and blasting away at the defensive

positions. It's pretty easy to get lost in the caverns if you're not keeping track of where you are; it's tough luck if you get stuck in a cave surrounded by gun emplacements with nothing to fight back with.

The game has a simple, but effective, plot and is well-designed with atmospheric sound and graphics. The gameplay can be a little frustrating at times, the worst thing about it being that you can't move your chappie around as fast as you'd like to, but, hey! it's all part of the plan to get you going back for just one more go.

Power Cut is an excellent game with some difficult sections for you to get through, but if you're a hardened shoot-'em-up fan you're unlikely to have many problems and could easily complete it after just a few sessions.



■ Here you are in action, destroying a power base. Our metallic marvel just can't stop himself from saying, "You're the disease, and I'm the cure." Sad bloke.

A NEW LICENCEWARE GROUP

Powerfist Productions is a new group producing a range of Licenceware games for the ST, they've already finished 11 disks worth of beauties and another three are under way. The programmers in the group started out by writing Shareware games but they found that the return was minimal to say the least. They got in touch with a selection of PD libraries to see if they could sell their disks as Licenceware – this means that the PD libraries sell the games under licence and pay a royalty to Powerfist for each disk sold. So far they have nine PD libraries distributing their games, including LAPD, Jewel PD and Aquila.

KM-TERM 1.9**PRICE: £10****FROM: KEVIN MILLICAN****CONTACT: 20 ST JOHNS ROAD,
BELTON, GREAT YARMOUTH
NR31 9NS**

Judging by the number of callers we get on the ST FORMAT BBS, you're getting more and more keen on comms, so it's worth taking a look at the latest version of a Shareware comms package called KM-Term for your modeming activities.

KM-Term doesn't include anything radically new but is easy to master and is fully compatible with the latest popular transfer protocols such as Jekyll and Z-Modem, making KM-Term a complete and powerful terminal emulator. The program can

emulate VT52, VT100 and ANSI terminals in medium and high resolutions making it compatible with just about all BBS services available.

When you run the program you are confronted with a blank screen with a flashing cursor in the top left corner – the terminal emulator – this is not an encouraging sight if you've never seen anything like it before. Don't worry, though, just press the <Help> key for a full list of key presses to run the program; pressing <Undo> returns to the terminal emulator. Pressing the right mouse button takes you to a much more interesting screen – the main control panel. This is where you set up the program, define baud rates, choose transfer protocols and generally set up the system configuration. You also access other options such as function key

Kevin Millican - revealed!

Kevin Millican, the man behind KM-Term, works at an engineering company that builds off-shore accommodation modules for oil and gas rigs and started programming software that he needed for work. His first major ST program was Quick CAD, a PD CAD program that works as a Desk Accessory.

Next he wrote a program called WIMS that manages the Welding Procedure Specifications and Quali-

cation records for his firm. All other software his company uses runs on PCs, but there is no equivalent PC software comparable to his ST program. Kevin's company now runs his ST program on Compaq 486 PCs.

Kevin wrote KM-Term because he wasn't happy with the other comms software available; he's more comfortable with his version and feels that it is "just about as good as it will ever be." How heart-warming.

macro assignments, autodialler and the ability to run other programs from here.

KM-Term doesn't use its own purpose-built file transfer software, instead you can assign external file protocols to be run from within KM-

Term to deal with your file transfers, so you can use the latest protocols available. Another useful feature is the call cost calculator so you know how much your calls are costing you.

There's a special built-in help file enabling you to get to grips with the commands used by KM-Term, and it has a Beginners Guide To Comms if you're a bit unsure of things. Because the program uses keyboard commands it's easy to get the hang of everything – and learn how to run up your phone bill in no time. KM-Term is one of the best comms programs available and is well worth the £10 Shareware fee.

■ The main control panel enables all those fiddly protocols to be set up easily, click on the appropriate button and set up the system.

**D-REZ****PRICE: £5****FROM: ANDREW GISBY****CONTACT: 44A EDRED ROAD,
DOVER, KENT CT17 0RP**

D-Rez is a severely addictive Asteroids style clone written in assembler and is part of the first "Entertainment" disk from Perfect Pixel Software, otherwise known as Andrew T Gisby. The game features four channel stereo sound and uses the full screen as the playing area – you can configure many of the game options yourself.

Instead of the usual outer space setting you normally see in Asteroids

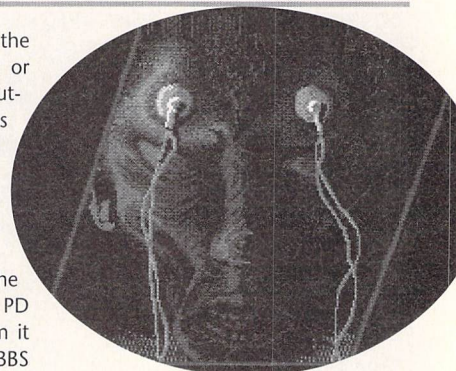
type games, Andrew opted for a Cyberspace scenario with the action taking place inside the "game grid," with humans battling against computer generated enemies trying to erase the human consciousness.

This gives you a greater range of aliens to fight against. Instead of battling against rocks falling aimlessly through space, many of the adversaries in this game are "intelligent" and actually change course to try and destroy you. Some of the larger aliens take an incredible number of hits before you manage to destroy them.

The game runs at an impressively high speed, with excellent sound samples and spot effects, and colours and graphics are used well.

The entire game is controlled by the mouse – moving the mouse left or right rotates your ship, the left button is fire and the right button is the thrust control. Be careful using thrust because you can bounce off the edge of the screen and then trap yourself when you're trying to escape from an alien.

The PD demo version of the game is available from most PD libraries and if you have a modem it can be downloaded from the STF BBS (0225 465977), file 97. D-Rez is not the best game you add to your collection, but if you like traditional shoot-'em-ups, it's not bad at all.

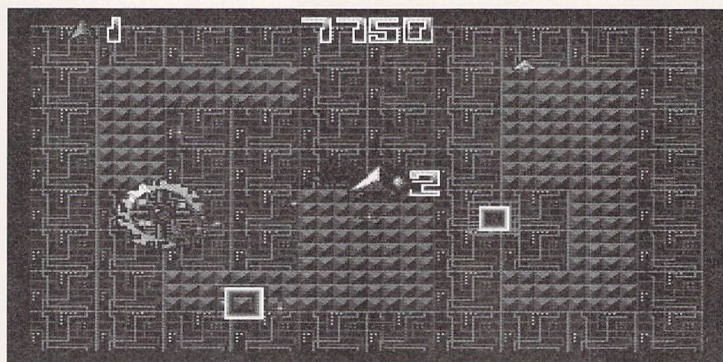


■ This green mutant chap is enough to put you off your dinner. Actually, it's a human jacked into the game grid playing against the software nasties generated by AIs (artificial intelligences.)

BOOST THAT EGO

Andrew Gisby has been interested in computer games since he was at college and works in computing professionally, developing business software. Many of his friends were impressed with the demos he created on the ST using assembler and persuaded him to create a game, the result was D-Rez.

We asked Andrew why he decided to release his game as Shareware. "Like all Shareware programmers I thought that it would be an easy way to earn some money, sadly the response in registrations is not what I would have hoped. I think all Shareware programmers think that they are going to earn a fortune when their program becomes popular, in most cases it just doesn't happen. I enjoy reading the letters from people who do register because they like the game, and that gives me a great feeling of satisfaction, an ego boost. I am working on other projects including a game that uses 3D polygons."



■ The end-of-level guardians are a tad more difficult to dispose of than the normal nasties, just keep firing until they blow. Meanwhile, even normal nasties appear to attack while you are trying to dispose of the guardian.

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Definitely a good thing

I think it is good news that we are seeing an increased amount of 1MByte software on the STF Cover Disks. We all know that most new serious packages require at least 1MByte of RAM to run and many recommend more. With programs such as SpeedoGDOS becoming available, 1MByte is a must if you want to make the most of your software.

Many people will agree that there is nothing worse than finishing writing a large document in your word processor only to find that you have no memory for printing it. This problem is very real, especially if you use multi-font word processors or desktop publishing software.

The increase in 1MByte games is also good news since it enables bigger games to be writ-

ten. With game prices at their current high levels, the last thing we need are games which we can complete within a few days.

I think the progression towards 1MByte software on the Cover Disks is a natural one, like the progression from single-sided to double-sided disks. I hardly think that flexibility of program size is the "flimsiest of reasons" to stop single-sided compatibility. I would be very surprised to find any manufacturers still producing software for single-sided drives.

I've had my 1MByte upgrade for over a year now and would say it's some of the best money I've ever spent on my STE.

Ian Pashley
Sheffield

stf: My thoughts exactly, Ian, and for putting them in such a clear and concise manner you win yourself £25. Biassed, me? Never.

Who needs advertising anyway?

While I agree that marketing is an important part of a company's potential success, it is only a part of it. The success of a business mainly depends on the actual product they sell. I feel this point has been lacking from some of the letters you've recently printed about Atari. Referring to the Falcon, of which I own a 4MByte version, the quality of what is under the keyboard convinced me that this is the machine of the 90s.

Before I bought it I owned three different models of Amiga 1200 - the Falcon's so-called competition - and not one of them worked properly.

Commodore may have fancy adverts on TV but Atari sell machines with a high technical specifications that actually work. Because of this Commodore have lost one potential customer and on



a larger scale could play a part in the imminent Atari rebirth.

Cennaro Vullo
Hertfordshire

stf: I do agree with you, Cennaro, but the main problem is that if Atari don't advertise, then no-one is going to know that they make excellent machines. Check out the proof that Atari are actually trying to rectify this bad reputation they have for marketing with the ad on the back of the Indispensable Guide that came free with this issue of STF.

Good value games?

My friends are always complaining about the price of computer games but I think they are good value, even if the software houses do make huge profits. Take a racing sim like *Formula One Grand Prix*. It is probably more adaptable than a Scalelectrix set costing twice as

Life without Lemmings 2

With regard to the cover of *STF* 49 and the headline "Lemmings 2 - you can't live without it," it would appear that some of us ST owners are going to have to. My son and I had been waiting for the release of this game ever since it was first announced. We had almost become fixtures in our local retailer's shop, popping in every week or so to check on progress.

At last, a copy arrived on the shelf, and we left happy clutching a copy of the game, but alas, it would not proceed past its intro screen. We returned the copy to the shop and the proprietor agreed to order a replacement. The new copy arrived and was checked on the shop's 1040. As it seemed to be OK I made my way home again only to find that it still would not load on our machine. Our system is an early 520STFM upgraded to

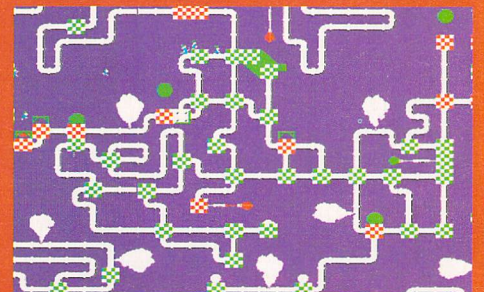
2.5MBytes with a Frontier board and a double-sided internal drive although it still has TOS v1.00.

The dealer rang the Psygnosis helpline and was apparently told that they believe that the game will not work with some (unspecified) memory expansions: "It is one track on the disk that seems to cause the problem." This "Help" person did not seem to know whether the game would run on a Mega ST/E, their only suggestion being to "switch the memory back to 1MByte." Seeing no point in trying further copies, I tried several different software routines to kid the machine into believing it was a 1040. None of these worked. Being just a trifle miffed, I wrote a fairly polite letter to Psygnosis. To date I have had no response, not even an acknowledgement of my letter.

While I appreciate what a great favour software houses are doing us humble ST users are doing by continuing to support our machine, I'm not surprised that some of them are experiencing falls in sales. It's difficult to appreciate a game, however great, if it doesn't work.

P N Bayford
London SW18

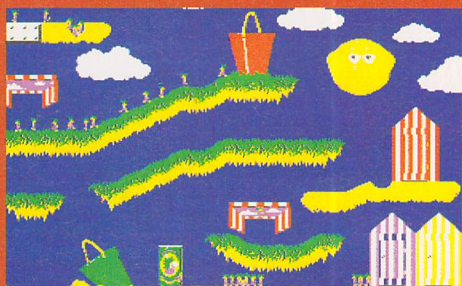
■ Despite some problems running *Lemmings 2* with some memory boards, for most of us it remains this year's essential game purchase.



■ If you have any problems with your copy of *Lemmings 2* get in touch with the Psygnosis helpline - the number's on the box - and if their suggestions still don't work send the disk back and ask for a replacement.

stf: To try and sort out this problem I contacted Psygnosis on your behalf and was told that there is no reason at all why your version of the game shouldn't work as long as your machine believed it only has 1MByte of memory - it should even work on your early TOS version so that shouldn't be a problem.

If you send your disk back to Psygnosis with a covering letter explaining the difficulty they say they'll be happy to replace it for you. The address you need is Psygnosis Ltd, South Harrington Building, Sefton Street, Liverpool L3 4BQ.



Writers wanted!

If you know lots about the serious side of the ST, can string a sentence together and would like to write, on a freelance basis, for the world's best-selling ST magazine, this could be your chance. *ST FORMAT* are looking for freelance feature writers with a stunning knowledge of the ST, an excellent command of the English language and lots of original ideas. If you think you've got what it takes to get your name into print send 300 words on what makes a good feature to Paula Richards, The Editor, *ST FORMAT*, 30 Monmouth Street, Bath, BA1 2BW.

kinda spooky! *ST FORMAT* have put an excellent raytracer, a wonderful demo and an astounding full game on the disk. I didn't think it was possible but *ST FORMAT* have proved me wrong. They write the best computer magazine in the history of the universe." That was my exact thought.

"Your magazine is the only good thing for me in my incredibly sad life"

I took the magazine home, read all the excellent features and brilliant reviews. I then read about the Cover Disk and was heartbroken to find that the *Chaos Engine* and *Persistence of Vision* both required 1MByte.

I am just a sad, sad person who has an STFM with only 0.5MBytes. I have no job and no money and so have no way of affording an upgrade. Woe is me.

2. I have completed *Dungeon Master* and now have a spanking good party of adventurers. I have heard that *Chaos Strikes Back* is much trickier but I think my party can handle it. Unfortunately, if you look back at problem number one and notice the lack of money and no job situation you will realise that I cannot afford a copy of the excellent game. I have such a sad life.

3. A girl in my class called Ginette will not go out with me which makes me very sad. I just feel like sitting in the corner and crying.

If you could just get me a job, send me a copy of *Chaos Strikes Back* and sort out my social life then I will be truly happy again.

Sebastian Newman
Dorset

Robert Swann
Clwyd

stf: Good point, Robert – but don't you object to shelling out £30 for a game and knowing that a good proportion of that goes towards the huge profits of software houses?

The sad corner

I am writing to complain about several things. None of them has anything to do with you really but your magazine is the only good thing for me in my sad life so I thought I would write to you.

1. I saw the excellent Cover Disk on the August edition of your magazine – I thought: "Wow! This is

stf: Sorry, Seb, but there's nothing we can do about your problems. Why not get out of that corner and do something with your life except sit there and mope? It'll do you a world of good.

What heroes

This is a story with a happy ending and concerns a company that I regard as probably the best in the games software industry, and who are fully deserving of ST owner's support, especially since the company fully supports the ST. The company concerned is MicroProse.

I purchased a 120MByte hard drive for my 1040STE and wanted to install some of my games. Two games produced by the company failed to install properly, one being several months old, but the other was brand new. After writing to MicroProse to explain what my problem was – and expecting a letter back telling me where to go – I was delighted to receive a Jiffy bag with all the necessary replacement disks and a letter telling me what to try if the disks didn't manage to cure the problem!

They also answered my questions about various hard drive related software. In fact, the odd times that I have written to MicroProse they have always replied.

Rob Morton
Cornwall

stf: Excellent stuff, that's what we like to get, a bit of unsolicited praise for companies in the industry who give exceptional service. If anyone else can better that tale, do let us know.

Miracles will happen

I have witnessed a miracle. I was in the process of writing you a letter a couple of months ago to ask for some help in *Dungeon Master* –

there was one door I just could not get past. Just as I finished the letter *ST FORMAT* 48 popped through the door. To my delighted surprise I found that you had beaten me to it and given me the solution before I had even sealed the envelope.

Your solution to *Ishar* is not quite complete. You do not point out that to get the rune tablet that is found in the forbidden house in Zendoria you need to give each person in your party a brainwash potion before going in. Is it because of typing errors or are the names spelt differently in different copies of the game? For example, you constantly refer to Elwingl and Vorgula the witch. In my version of the game I have Elwingil and Morgula the witch.

Duncan MacIver
Lanark, Scotland

stf: Thanks for that useful hint about *Ishar* – and we reckon the name of the witch is likely to be *Morgula* if that's what you've actually come across in the game. Everywhere that we've seen solutions to *Ishar* she's been called something different.

No A-Train

Eagle Software advertise an ST version of *A-Train* for £17.99 but my local dealer maintains that Ocean have no plans to release such a version. What's the truth?

John Wellburn
West Lothian

stf: Our information from Ocean is, sadly, that *A-Train* is not going to be coming out on the ST.

We said what?

I have noticed in recent issues of your magazine the increasing numbers of letters about removing disk labels from disks. I find that if you

Conversation with a PC owner



I think there is great potential for Atari products (the new Falcon, in particular) in Australia if only people knew more about their existence.

I see myself as an Australian ST owner rather like a Bosnian Muslim defender of Sarajevo would see his or her situation. Here I am (literally) cut off from the rest of the world trying to do what's right (sticking up for Atari and defending innocent civilians) with little or no assistance (from Atari corp and the rest of the civilised world). Both of us need help from the outside world. Many

students at high school spend thousands of dollars on PCs to help them through their final year at school because they think that PCs are the only "serious" choice available to them. Three friends bought 1040STEs and are very pleased with the cost effectiveness and versatility of their machines, be it with games, music, word processing or any other area of computer use, they find that the ST can do it all. To prove my point I invited a couple of my PC-owning friends around for a quick game and a peek at my machine.

PC Owner: "What's this, then? No separate keyboard?"

Me: "Nope, but the model up from this, the Mega STE, has got one."

**(Score: PC owner – 1
ST owner – 0)**

PC Owner: "Atari? I didn't even know they still made computers!"

Me: "Most people in Australia don't."

**(Score: PC owner – 2
ST owner – 0)**

Me: "But did you know that the Atari ST is the standard for MIDI music computing?"

PC owner: "No, really?"

**(Score: PC owner – 2
ST owner – 1)**

On booting my ST we were confronted with GEM. They saw it was green and ugly and said "Ha ha! Your windows look ugly, man! So how many MBytes does that take up on your hard drive? Windows takes up 5MBytes."

Me: "No need for a hard drive, it's all in the ROM. I agree that this old (TOS 1.6) operating system is ugly but it's efficient, easy to use and won't crash on you, unlike what I've heard about Windows. Besides, for the price of a DOS upgrade I can get new ROMs installed to give me a Desktop that's as customisable and pretty as any."

**(Score: PC owner – 3
ST owner – 2)**

What an offer!

My ST came to life when I first laid my hands on a copy of *ST FORMAT*. Of course the first thing I did was order all the back issues that were available but, to my surprise, a few were completely sold out. How could I get the missing issues and disks? I'm just missing numbers one to six, nine, 11 and 17 and I'm willing to pay big for them.

Gravensteyn Ray
Leuvensesteenweg 312
3070 Kortenberg
Belgium

stf: If anyone can help Gravensteyn (and make sure you spell his name right!) get in touch with him at the above address - and remember - he's saying he's willing to pay big!

stick a new label on top, the disk still fits in the drive and when that label needs replacing the two of them come off much easier than one because of the extra thickness.

D Whyte
Glasgow

stf: That's all very interesting, D, but I think you must have sent this letter to the wrong mag - we haven't had any letters about disk labels in Feedback since I became Editor back in November.

"Not too tight fisted"

I have just read T Assman's letter in this month's *STF* and am surprised at his/her reasoning regarding the lack of support for the STE. STFM owners are too tight-fisted to swap over, eh? Well, let me just do a few sums.

I bought my ST in 1988 when things were more expensive and the STE wasn't even a twinkle: 520STFM at £300, double-sided drive £80, memory upgrade for £70, STFM-specific genlock at £150 and software for around £500 equals a total of £1,100. I haven't counted the second drive, the printer, the monitor, the sampler and the digitiser which are probably not specific to the STFM. Just see how much financial commitment some of us have in our machines. Am I seriously expected

to sell almost all my kit (that I have spent 18 months collecting) at a vastly reduced price, and then to start all over again by buying a virtually identical machine? Why should I buy a machine that isn't even compatible with much of my software? I have a setup that I am very happy with already, thank you very much.

If "T" is so worried about the effect older machines are having on newer models why hasn't he/she swapped his/her STE for a Mega STE to save it from oblivion and then swapped the Mega STE for a TT just in case and then the TT for a Falcon in readiness to sell up for the next generation of Falcons? And then sell his/her Falcon for a Jaguar when the time comes? Too tight-fisted, I imagine.

Tony Pressley
Notts

stf: I thought that letter from last month might provoke a bit of a reaction - Tony, you're not the only one who feels that way. So, T, why don't you try and engage your brain before you accuse other readers of being tight-fisted?

If there's anything you want to share with the rest of the ST community, please write to Paula Richards, The Editor, Feedback, ST FORMAT, 30 Monmouth Street, Bath, Avon BA1 2BW

PC owner: "But what about your mouse driver program?"

Me: "That's in the ROM as well. Common sense, really."

(Score: PC owner - 3 ST owner - 3)

I loaded *Vroom* and watched them go pale green when they found out I needed less than 1MByte RAM for it to run (score 3 - 4) and had not shelled out a few hundred dollars for a sound card to get those tasty sampled engine noises (score 3 - 5) or a graphics card for those slick, fast graphics (Score 3 - 6).

I showed them *Protext* and *Pagestream* to ensure that they weren't left with the impression

that this was a mere games machine. I showed off some music demos to rub salt in their wounds, but I dealt the final blow when they asked me how much my ST had cost.

Me: "How much was yours?"

PC owner: "A\$2,300 without a soundcard. And you?"

Me: "A\$395 for a 1MByte STE."

(Final score: PC owner - 3, ST owner - 7)

Sam Bektas
Victoria, Australia

stf: Sam, that's brilliant - although I'm not wild about this continual bickering your presentation deserved to be printed.

ESSENTIAL CONTACTS

Need to find that number of that company but lost the reference? Look no further...

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■ If you would like to correct or add to any of the entries in this directory, please write to Essential Contacts, *ST FORMAT*, 30 Monmouth Street, Bath BA1 2BW.

PIXEL PAINTING

You want £25? Well, you've got to earn it! Send us your artistic creations



Martin Anthony of Orpington wins the £25 prize this month with his stunning drawing of an X-Wing fighter from the *Star Wars* films. Martin's preferred drawing program is *Canvas*, and he uses colour to great effect to give a golden metallic glow on the fuselage of the fighter. Martin also uses perspective very well to add a dynamic sense of movement to his drawing. The drawing took him around ten hours to create.

If you can produce pictures to the standards shown here – or even better then send your efforts on a disk to Pixel Painting, *ST FORMAT*, 30 Monmouth Street, Bath

BA1 2BW. You could win yourself £25. Please include a text file with complete details of how you created your picture, intermediate stages and your name and address. Please try and make sure all your entries are in *Degas*, *Neochrome* or *Spectrum 512* file formats wherever possible, it makes it much easier for us to look at them.



■ LEONARDO DA VINCI'S MANOR

Paul Keller of Saltash was a close second with this picture of Leonardo da Vinci's manor house at Clos-Lucé in the Loire valley in France. The house is now treated as a museum.

■ X-WING - "I started out using a grid so that I

could establish a rough outline of the fighter, then I drew the outline in black just concentrating on the most prominent lines. I then selected the palette using a range of dirty yellow, reds and greys to suit the subject. I darkened the background and changed the outline to white before starting to add detail. I coloured areas approximately and then added detail pixel by pixel using zoom mode, using anti-aliasing to produce a smoother result. I detailed the body and added shadows to add depth and solidity, spending a lot of time getting all the shadows just right."

THAT ESSENTIAL PANEL

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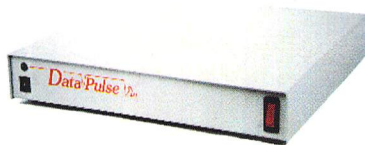
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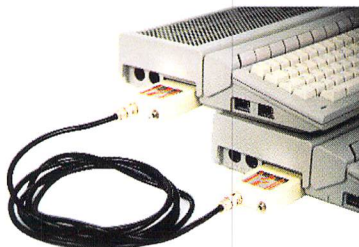
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Discovery Pack	£149.00

Falcon 030

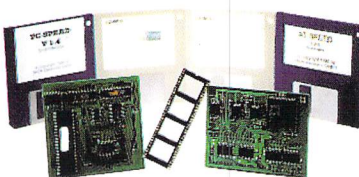
- 16MHz 32 bit 68030 Central Processor, 16MHz Blitter, 32MHz 56001 Digital Signal Processor
- 1.44Mb 3.5" Floppy, up to 14Mb RAM. Displays 65536 colours from 262144 palette at 768 x 480 resolution
- 8 Channel 16 bit, higher than CD quality. Stereo sound sampling

FALCON 4Mb 120Mb HD £999.00

Software

Silhouette	£60.00
Scanlite Accessory	£20.00
Diamond Back 2	£34.99
Diamond Edge	£44.99
Image CAT	£24.99
HD Turbokit	£4.99

PC Emulators



● Run PC Software on your ST	
● Full installation instructions	
● XT or AT Emulation	
PC Speed STFM (XT)	£49.99
PC Speed STE (XT)	£49.99
AT Speed STFM (8MHz)	£129.00
AT Speed STE (8MHz)	£139.00
AT Speed C16 STFM	£189.00
AT Speed C16 STE	£199.00

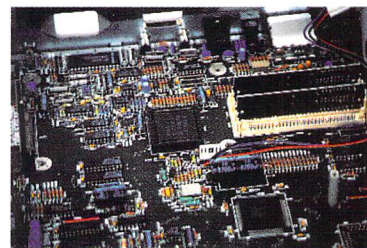
Repair Services

The **ONLY** Atari authorised Service Centre
Our Service department can repair ST's in minimum time at competitive rates. We can arrange for fully insured, courier pickup and return delivery of your machine to ensure it's safety. We even have a same day service which will ensure your machine is given priority and subject to fault, completed the same day.

We can fit memory upgrades, PC Emulators, Security devices, ROM upgrades, hard drives to Mega STE's etc.

We offer a Quotation service for £15 for which we will examine your machine and report back with an exact price for repair. If you do not wish to go ahead with the repairs then just pay the £15. However if you do go ahead then the charge is included in the minimum charge.

Please note: The minimum charge covers labour, any extra parts are chargeable.



Quotation	£15.00
Minimum repair charge	£32.25
Same day service	£15.00
STFM(E) PSU	£34.99
1Mb internal drive	£39.99
A/B Boot switch	£4.99
TOS 2.06 + Switch STFM	£65.00
TOS 2.06 + Switch STE	£65.00

Courier Pickup	£11.00
Courier Return	£7.00

Phone for price and availability of ST spares.

Monitors



Philips 8833 MKII	£199.99
Includes 12 Months on-site warranty (Mainland UK) and free Lotus Turbo Challenge II game.	
Hi-Res Mono Monitor	£139.99
High quality 14" SVGA monitor with ST adaptor. Fully compatible with all ST Hi-Res Programmes.	
Philips 15" FSTTXX TV	£259.99
Fully Remote control 60 channel. Fast text TV with Scart input for near monitor quality display.	
Colour SVGA Monitor	£239.99
High quality Colour SVGA Monitor 28 dot pitch. For use with Falcon.	

Falcon VGA Adaptor	£9.99
Falcon ST Monitor Adaptor	£9.99
Philips SCART to ST/STE	£9.99
8833 Mk II to ST/STE	£9.99

technical hotline
0234 841882

POWER SCANNER



The award winning scanner from Power Computing allows you to scan up to 400 DPI in real-time greyscale, with an autoscan rate detect. The scanning software included allows you to edit and manipulate any image you scan.

POWERSCANNER£99

HI-SOFT SOFTWARE

High quality software for your Atari ST.

LATTICE C v5.0£89
DEVPAC v2.0£29
HI-SOFT C£29
PROFLIGHT£29
DEVPAC v3.0£69.95

ICD LINK

The "Link" from ICD includes an external SCSI host adaptor, allowing the Atari ST to connect to external SCSI devices e.g. external hard disk, floppy drives, optical drives and CD Rom drives which were originally designed for the Apple Mac, IBM PC etc. Just plug-in and no power supply is needed.

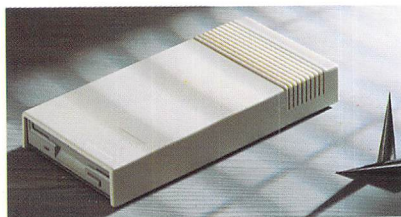
ICD-THE LINK£69.95
AD SCSI PLUS£89
AD SCSI ST£79
ICD PRO UTILITIES£39.95

SERIES 900 HD

The Series 900 HD features a buffered through port, optional battery backed clock, high speed 20ms seek rate, write protect switch, power supply and ICD interface and utility disk. (Many sizes available)

SERIES 900 52MBQ£329
SERIES 900 80MB£399

PC720B POWER DRIVE



The award winning external disk drive which includes a virus blocker, built-in Blitz Turbo and is able to boot from drive B. This is the ultimate in external disk drives for the Atari ST.

PC720B£65

PC720I

The Atari internal disk drive.

PC720I£39.95

PC720 0I

The official Atari internal disk drive (no case cutting, but must be the small version button version).

PC720 0I£45

PC720P

The Power Drive including PSU.

PC720P£55

DRIVE B CABLE

If you have an internal drive that is not compatible with "boot from drive B", this cable will solve your problem.

DRIVE B CABLE£9.95

BLITZ TURBO

Back-up disks at lightning speeds. Blitz copies from the internal to the external drive and cleverly by-passes your ST's disk controller chip. In around 40 seconds you can back-up an ST disk, what's more you can now switch between your disk drive and Blitz Turbo without disconnecting your blitz interface. Probably the best Atari disk copier on the market. (1988 Copyright act applies)

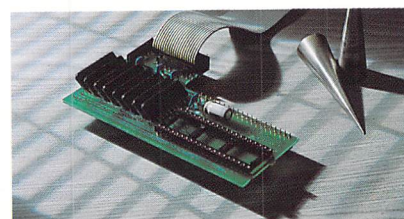
BLITZ TURBO£25
ORIGINAL BLITZ TURBO£15

SUPERMON

SuperMon comes with all the features of the "Ultimate Cartridge" and more. Some of the SuperMon features are, Program Switcher- allows two programs to be in the memory simultaneously and switched between at the touch of a key, Printer Spooler- allows files to be printed at the same time as other tasks, Comprehensive Debugger- disassemble programs and step through them, intercept OS calls, search memory or find where a routine is called from automatically, Diagnostics Function- check the internal functioning of your ST disk analyser, custom format disks, read/write sectors, hide files, Utilities- The SuperMon also has many utility functions available, including reset proof RAM disk, mouse trap function, time display, screen snapshot and 50/60Hz display toggle.

ULTIMATE CARTRIDGE£25
INCLUDING SUPERMON£39

ST RAM EXPANSION



The Atari RAM Expansion requires no soldering and plugs directly inside the ST using the latest capacity RAM chips. Full fitting instructions are supplied.

The ST RAM Expansion is available either as a 2MB or 4MB RAM expansion.

2MB RAM EXPANSION£99
4MB RAM EXPANSION£169
1MB SIMM FOR STE£25
512K RAM STFM£45

MONITORS

Philips CM8833 Mk2 colour monitor including cable and on-site warranty. Many other monitors are available from greyscale to multi-sync.

CM8833 MK2£239
INCLUDING CABLE

